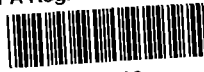


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315288



**PRELIMINARY ASSESSMENT/
VISUAL SITE INSPECTION**

**AMERICAN STEEL AND WIRE CORPORATION
CUYAHOGA HEIGHTS, OHIO
OHD 004 220 810**

**FORMERLY U.S. STEEL CORPORATION
CUYAHOGA PLANT**

FINAL REPORT

PH 6/2/92

Prepared for

**U.S. ENVIRONMENTAL PROTECTION AGENCY
Office of Waste Programs Enforcement
Washington, DC 20460**

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PRC Environmental Management, Inc. (PRC), performed a preliminary assessment and visual site inspection (PA/VSI) to identify and assess the existence and likelihood of releases from solid waste management units (SWMU) and other areas of concern (AOC) at the American Steel and Wire Corporation (ASW) facility in Cuyahoga Heights, Ohio. This summary highlights the results of the PA/VSI and the potential for releases of hazardous wastes or hazardous constituents from SWMUs and AOCs identified. In addition, a completed U.S. Environmental Protection Agency (EPA) Preliminary Assessment Form (EPA Form 2070-12) is included in Attachment A to assist in prioritization of RCRA facilities for corrective action.

The ASW facility manufactures steel rods and wires. The facility primarily generates contact and noncontact wastewater, spent pickle liquor sludge (K062), scrap metals, waste oils, and lubricating greases. The facility has operated at its current location since 1986. It occupies 280 acres in an industrial area and employs about 400 people. The facility's current regulatory status is that of a generator of hazardous waste.

The ASW facility has manufactured steel since the early 1900s when United States Steel Corporation (USS) owned the facility. Until 1986, ASW (formerly known as the US Steel Cuyahoga Plant) was a subsidiary of USS (USS is now part of the USX Corporation [USX]). USS closed the plant in 1984. In 1986, ASW reopened the facility.

When USS owned ASW, the facility was a treatment, storage, and disposal facility that operated two hazardous waste storage units (a container storage area [SWMU 4] and a tank farm [SWMU 5]). These storage units were closed in 1984 and currently are undergoing RCRA closure.

The PA/VSI identified the following 10 SWMUs at the facility:

Solid Waste Management Units

1. Wastewater Treatment Lagoon
2. Sludge Drying Beds
3. Scale Pit
4. Former Hazardous Waste Drum Storage Area
5. Former Hazardous Waste Tank Farm
6. Dumpster Boxes
7. Baghouse
8. Hopper

9. Drum Storage Area 1
10. Drum Storage Area 2

RELEASED
DATE 1/13/99
RIN # 639-99
INITIALS MJ

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No AOCs were identified at the facility.

SWMUs 1 through 3 and 6 through 10 have a low potential for release to air, surface water, ground water, and on-site soils. No releases have been documented from these units, and the units have adequate containment to prevent releases. SWMUs 4 and 5 have a low potential for release to the air and surface water because the units are no longer operational. However, SWMUs 4 and 5 have a high potential for release to on-site soils because both units lacked containment: containers were placed directly on bare soil at SWMU 4, and potentially contaminated soils have been excavated as part of closure of SWMU 5. SWMUs 4 and 5 have a moderate potential for release to the ground water because both units lacked containment and spills could migrate through the porous slag soil to ground water. As stated above, SWMUs 4 and 5 are currently undergoing RCRA closure.

The Cuyahoga River and the former Ohio Canal are located adjacent to the facility. ASW obtains part of its industrial water supply from the canal. A wetlands area also is located approximately 0.25 miles south of the wastewater treatment lagoon (SWMU 1). Ground water is not known to be used in the general area of the facility. The City of Cleveland provides drinking water. Access to the facility is controlled by guards and barriers (fences and the Cuyahoga River).

PRC recommends that sampling be conducted at SWMUs 4 and 5 in accordance with the facility's approved closure plan. Any contaminated soils found should be excavated and disposed of off-site.

1.0 INTRODUCTION

PRC Environmental Management, Inc. (PRC) received Work Assignment No. C05087 from the U.S. Environmental Protection Agency (EPA) under Contract No. 68-W9-0006 (TES 9) to conduct preliminary assessments (PA) and visual site inspections (VSI) of hazardous waste treatment and storage facilities in Region 5.

As part of the EPA Region 5 Environmental Priorities Initiative, the RCRA and CERCLA programs are working together to identify and address RCRA facilities that have a high priority for corrective action using applicable RCRA and CERCLA authorities. The PA/VSI is the first step in the process of prioritizing facilities for corrective action. Through the PA/VSI process, enough information is obtained to characterize a facility's actual or potential releases to the environment from solid waste management units (SWMU) and areas of concern (AOC).

A SWMU is defined as any discernible unit at a RCRA facility in which solid wastes have been placed and from which hazardous constituents might migrate, regardless of whether the unit was intended to manage solid or hazardous waste.

The SWMU definition includes the following:

- RCRA-regulated units, such as container storage areas, tanks, surface impoundments, waste piles, land treatment units, landfills, incinerators, and underground injection wells
- Closed and abandoned units
- Recycling units, wastewater treatment units, and other units that EPA has generally exempted from standards applicable to hazardous waste management units
- Areas contaminated by routine and systematic releases of wastes or hazardous constituents. Such areas might include a wood preservative drippage area, a loading-unloading area, or an area where solvent used to wash large parts has continually dripped onto soils.

An AOC is defined as any area where a release to the environment of hazardous waste or constituents has occurred or is suspected to have occurred on a nonroutine and nonsystematic basis. This includes any area where such a release in the future is judged to be a strong possibility.

The purpose of the PA is as follows:

- Identify SWMUs and AOCs at the facility.
- Obtain information on the operational history of the facility.
- Obtain information on releases from any units at the facility.
- Identify data gaps and other informational needs to be filled during the VSI.

The PA generally includes review of all relevant documents and files located at state offices and at the EPA Region 5 office in Chicago.

The purpose of the VSI is as follows:

- Identify SWMUs and AOCs not discovered during the PA.
- Identify releases not discovered during the PA.
- Provide a specific description of the environmental setting.
- Provide information on release pathways and the potential for releases to each medium.
- Confirm information obtained during the PA regarding operations, SWMUs, AOCs, and releases.

The VSI includes interviewing appropriate facility staff, inspecting the entire facility to identify all SWMUs and AOCs, photographing all visible SWMUs, identifying evidence of releases, initially identifying potential sampling parameters and locations, if needed, and obtaining all information necessary to complete the PA/VSI report.

This report documents the results of a PA/VSI of the American Steel and Wire (ASW) facility in Cuyahoga Heights, Ohio. The PA was completed on January 31, 1992. PRC gathered and reviewed information from Ohio Environmental Protection Agency (OEPA) and from EPA Region 5 RCRA files. The VSI was conducted on February 12, 1992. It included interviews with facility representatives and a walk-through inspection of the facility. Ten SWMUs were identified at the facility; no AOCs were identified.

PRC completed EPA Form 2070-12 using information gathered during the PA/VSI. This form is included in Attachment A. The VSI is summarized and 18 inspection photographs are included in Attachment B. Field notes from the VSI are included in Attachment C.

2.0 FACILITY DESCRIPTION

This section describes the facility's location, past and present operations (including waste management practices), waste generating processes, history of documented releases, regulatory history, environmental setting, and receptors.

2.1 FACILITY LOCATION

The ASW facility is located at 4300 East 49th Street in Cuyahoga Heights, Cuyahoga County, Ohio (latitude 41° 20' 37" N and longitude 81° 39' 44"W), as shown in Figure 1. The facility occupies 280 acres in an industrial area.

The ASW facility is bordered on the north by a railroad, on the west and south by the Ohio Canal and Cuyahoga River, and on the east by East 49th Street. A man-made bluff primarily composed of slag deposits and approximately 40 to 60 feet high runs through the ASW property. Approximately 200 acres of the facility lie below the bluff. The manufacturing operations occupy 80 acres on the bluff (ASW, 1992a). A security fence surrounds the entire facility, except at the Cuyahoga River.

2.2 FACILITY OPERATIONS

The ASW facility currently manufactures rod and wire from steel billets. The manufacturing operations occur at the rod, wire, and cold roll mills. In the rod mill, steel billets are heated and rolled into rods of various sizes. Rods manufactured in the rod mill are sold to customers and also used by ASW as raw materials in the wire mill. In the wire and cold roll mills, rods are cleaned, coated, and annealed or drawn to produce various wire products.

ASW has operated at this location since July 1986 and currently employs approximately 400 employees (ASW, 1992a). In addition to the rod, wire, and cold mills, the facility includes a billet yard, administrative offices, metallurgy laboratories, maintenance shop, warehouses, and parking lots.

ASW operates a wastewater treatment lagoon (SWMU 1) located near the Ohio Canal and Cuyahoga River. In 1986, the facility constructed several sludge drying beds (SWMU 2) near the lagoon to dewater sludge dredged from the lagoon. ASW uses a scale pit (SWMU 3) to remove



AMERICAN STEEL AND WIRE CORPORATION
CUYAHOGA HEIGHTS, OHIO

FIGURE 1
FACILITY LOCATION

PRC ENVIRONMENTAL MANAGEMENT, INC.

steel particles and oil from wastewater generated in the rod mill. The steel particles and waste oil are recycled by off-site facilities.

US Steel - Cuyahoga Plant (ASW's predecessor) formerly operated a hazardous waste drum storage area (SWMU 4) and tank farm (SWMU 5) adjacent to the cold roll mill. These units stored spent pickle liquor generated at the wire mill. Both units areas are currently undergoing closure. Several dumpster boxes (SWMU 6) containing excavated soils from the tank farm are located near the cold roll mill. ASW operates a baghouse (SWMU 7) outside the rod mill. Dusts collected by the baghouse are combined with other metal-bearing wastes (such as scrap metal) in a hopper (SWMU 8) outside the old Normalizing Building.) ASW stores waste oils and lubricating greases at two drum storage areas (SWMUs 9 and 10) at the facility. Both waste oils and greases are sent off site for reclamation.

All SWMUs identified at the facility and their current status are listed in Table 1. The facility layout, including the location of SWMUs at the facility, is shown in Figure 2.

The ASW facility has manufactured steel since the early 1900s when United States Steel Corporation (USS) owned the facility. Until 1986, ASW (formerly known as the US Steel Cuyahoga Plant) was a subsidiary of USS (that is now part of the USX Corporation [USX]). The facility was shut down in 1984. In 1986, ASW, which separated completely from USX, reopened the plant (ASW, 1992a).

Currently, there are two tenants that also operate at the ASW facility. Gibraltar Strip Steel has leased manufacturing space inside the cold roll mill since 1987. In addition, Nook Industries has been mining slag deposits within the facility since 1987 (ASW, 1992a). Neither of these facilities generates or manages hazardous wastes.

2.3 WASTE GENERATING PROCESSES

The primary waste streams generated at the ASW facility are contact and noncontact wastewater, spent pickle liquor (K062), scrap metals, and waste oils. These wastes are all generated during the rod and wire production process. The majority of wastewater generated is recycled. Wastes generated at the facility are discussed below and are summarized in Table 2.

TABLE 1
SOLID WASTE MANAGEMENT UNITS (SWMU)

SWMU Number	SWMU Name	RCRA Hazardous Waste Management Unit*	Status
1	Wastewater Treatment Lagoon	No	Active
2	Sludge Drying Beds	No	Active
3	Scale Pit	No	Active
4	Former Hazardous Waste Drum Storage Area	Yes	Undergoing Closure
5	Former Hazardous Waste Tank Farm	Yes	Undergoing Closure
6	Dumpster Boxes	No	Active
7	Baghouse	No	Active
8	Hopper	No	Active
9	Drum Storage Area 1	No	Active
10	Drum Storage Area 2	No	Active

* A RCRA hazardous waste management unit is one that currently requires or formerly required submittal of a RCRA Part A or Part B permit application.

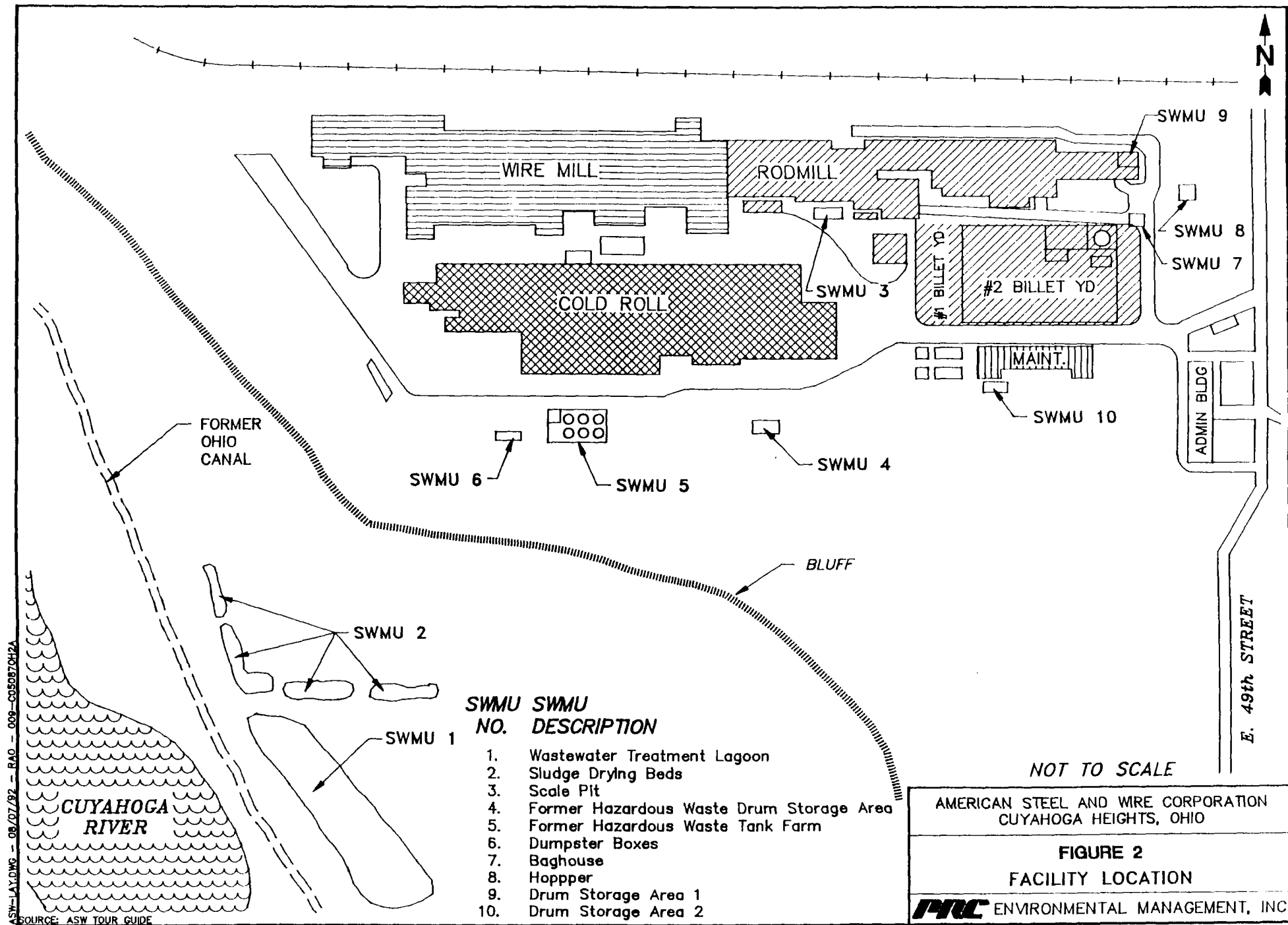


TABLE 2
SOLID WASTES

Waste/EPA Waste Code	Source	Primary Management Unit*
Acid sludge/K062	Spent Pickle Liquor Regeneration System	- -
Spent pickle liquor/K062	Picking tanks in Wire and Cold Mills	SWMUs 4 and 5
Contact and noncontact wastewaters (includes surface runoff)/NA**	Rod, Wire, and Cold Mills	SWMUs 1 and 3
Contaminated soils and other media/D008	Spills	SWMU 4
Wastewater treatment sludge/NA	Wastewater Treatment Lagoon	SWMU 2
Metal dusts/NA	Rod, Wire, and Cold Mills	SWMUs 7 and 8
Scrap metal/NA	Rod, Wire, and Cold Mills	SWMUs 3 and 8
Waste oils and lubricating greases/NA	Rod, Wire, and Cold Mills	SWMUs 9 and 10
Contaminated soils/NA	Tank Farm (SWMU 5) closure	SWMU 6

Note:

* Primary management unit refers to a SWMU that currently manages or formerly managed the waste.

** Nonapplicable (NA) designates nonhazardous waste.

Wastewater is generated by various processes at the facility. This wastewater includes noncontact cooling water from the rod, wire, and cold mills, wastewater from stands, autowash and backflush in the rod mill, and blowdown from boilers. Noncontact wastewater from the rod mill furnace and stands, and boiler blowdown are routed to the Scale Pit (SWMU 3) for treatment before being combined with other wastewater, including surface runoff, at the wastewater treatment lagoon (SWMU 1).

Currently, ASW recycles approximately 99 percent of the wastewater entering the lagoon (SWMU 1) back to manufacturing processes in the plant (ASW, 1992a). Occasionally, ASW discharges treated wastewater to the Cuyahoga River through permitted outfall 001. Wastewaters from sanitary uses and wire mill rinses are discharged to the sanitary sewer.

In 1986, ASW dredged the wastewater treatment lagoon (SWMU 1). At that time, ASW constructed the sludge drying beds (SWMU 2) to dewater the nonhazardous sludge. Before 1986, US Steel - Cuyahoga Plant (ASW's predecessor) deposited dredged sludge in various areas near the lagoon (Envisage Environmental, Inc., 1987). Between 1986 and 1991, ASW applied a mixture of the sludge (with sand or slag plus topsoil) to several areas of the plant to support vegetation and enhance the highly porous slag soil (ASW, 1991a).

ASW generates spent pickle liquor (K062) as a waste product from steel pickling operations in the wire mill. Until 1984, US Steel-Cuyahoga Plant (ASW's predecessor) stored the spent pickle liquor in containers at the former hazardous waste drum storage area (SWMU 4) and at a hazardous waste tank farm (SWMU 5) before disposal or recycling off site. US Steel-Cuyahoga Plant also stored contaminated soils, Extraction Procedure (EP) toxic for the lead (D008), at the drum storage area (SWMU 4). When ASW reopened the facility in 1986, ASW installed a continuous acid regeneration system at the wire mill to recycle the spent pickle liquor. The acid regeneration system returns recycled acid to the pickling process. The regeneration system also produces ferrous sulfate that is sold as raw material (ASW, 1992a). Twice a year, a disposal company pumps acid sludge (K062) from the bottom of several tanks in the regeneration system to a tanker truck. The acid sludge is then disposed of off site at a deep well injection facility.

ASW generates various scrap metals and metal-bearing dusts in the rod, wire, and cold mills. Grinding and buffing operations in the rod mill produce nonhazardous dusts that are collected in a baghouse (SWMU 7). ASW combines this dust with other scrap metal (that is,

shavings, cuttings, and other metal pieces) generated by the wire and cold mills in a hopper (SWMU 8) located outside the rod mill. The scrap metal and metal-bearing dusts are sent to an off site metal reclaimer. ASW also generates a metal-bearing sludge (primarily steel) when dredging the scale pit (SWMU 3) near the rod mill. This nonhazardous sludge also is sent to an off site reclamation facility (ASW, 1992a).

ASW generates waste oils from several sources at the plant. Various waste oils and lubricating greases are produced by machinery and equipment in the rod, wire, and cold mills. ASW also generates oily wastes from skimming oil from wastewater at the scale pit (SWMU 3) and wastewater treatment lagoon (SWMU 1). Waste oils and greases at the site are sent to several off-site reclamation facilities including SK services, Research Oil, and Ameriwest (ASW, 1992b). The oils are either blended for reuse as fuels or regenerated as lubricants (ASW, 1992a).

The part-washer units are supplied and serviced by a solvent reclamation facility. At no time are spent solvents from the parts washers stored on site. USX has excavated soils potentially contaminated with heavy metals, from the closure of the former hazardous waste tank farm (SWMU 5). Currently, these contaminated soils are stored in dumpster boxes (SWMU 6) near the tank farm, pending determination of their regulatory status (ASW, 1992a). ASW has produced small amounts of waste associated with an asbestos abatement program. The asbestos was disposed of at an off-site facility.

2.4 HISTORY OF DOCUMENTED RELEASES

This section discusses the history of documented releases to ground water, surface water, air, and on-site soils at the ASW facility.

There are no documented releases from any SWMUs at the facility, with the exception of the wastewater treatment lagoon (SWMU 1). OEPA inspections have noted releases of oily wastewater from overflow and leakage around the headwall of the unit into the Cuyahoga River (OEPA, 1991a). OEPA notified ASW that the leakage was a violation of the facility's National Pollution Discharge Elimination System (NPDES) permit. ASW corrected the overflow and leakage problems by modifying the headwall and implementing operational changes to prevent overflows (ASW, 1991b). Potentially contaminated soils from the storage of K062 at SWMU 5 have been excavated and are currently awaiting characterization.

During 1987, OEPA required ASW to determine whether dredged sludge from the lagoon (SWMU 1) was releasing hazardous constituents to the environment. ASW contracted Envisage Environmental, Inc. to sample and analyze soils in the sludge drying beds (SWMU 2) situated in the lowlands adjacent to the lagoon and Cuyahoga River. Results of Envisage Environmental, Inc.'s study concluded that the deposited sludge and surrounding soils near the lagoon did not contain Extraction Procedure (EP) toxicity constituents greater than regulatory levels. In addition, Envisage Environmental, Inc. analyzed the soils for various volatile organic compounds (VOC), semivolatiles, and acidic compounds, none of which were present above detection limits (EEI, 1987).

2.5 REGULATORY HISTORY

US Steel Cuyahoga Plant (ASW's predecessor) submitted a notification of hazardous waste activity to EPA in 1980. The plant submitted a RCRA Part A application on November 18, 1980. The application listed a container storage area (S01) (capacity 2,800 gallons) and tank storage area (S02) (capacity 160,000 gallons). The application also identified the following RCRA hazardous waste streams to be managed in these units: spent pickle liquor (K062), and Waste Extraction Procedure (EP) toxic for lead (D008) (USS, 1980). In 1982, US Steel Cuyahoga plant submitted a revised Part A application, identifying an additional waste stream discarded commercial chemical product (U210) to be managed in the container storage area. The estimated annual quantity of each waste stream was also revised (USS, 1982).

In 1984, US Steel Cuyahoga Plant ceased operations at the facility and submitted a closure plan for the container storage area and tank farm to OEPA (USS, 1984). In 1986, ASW reopened the facility and submitted a new notification of hazardous waste activity. The new notification identified ASW as the owner and operator of the facility and categorized the facility as a generator of waste streams K062, corrosive wastes (D002), and reactive wastes (D003) (ASW, 1986). In 1987, OEPA conditionally approved the US Steel Cuyahoga Plant's closure plan, and EPA concurred with OEPA's review and approval (USEPA, 1987).

Because some confusion existed over who was responsible for the closure of the container storage area and tank farm, both ASW and USX were required to submit closure plans for the two units. ASW submitted a closure plan to OEPA for the two units on November 15, 1989. ASW submitted revisions to the closure plan to OEPA on August 23, 1991 (OEPA, 1991c). OEPA approved ASW's plan on November 14, 1991 (OEPA, 1991c). USX submitted a closure plan for

the two units on January 14, 1991, which OEPA found deficient (OEPA, 1991b). During the VSI, ASW reported that USX was conducting the closure of the container storage area and tank farm pursuant to a court order (ASW, 1992a). No further information on the court order or the status of the unit's closure was obtained for this report.

Currently, ASW operates as a generator of spent pickle liquor (K062) and spent mineral spirit solvents (D001) from part-washing machines. These wastes have not accumulated at any areas on site (ASW, 1992a).

Since 1986, OEPA has inspected ASW several times. In 1986, OEPA did not identify any RCRA violations; however, the facility was not operating at the time of the inspection (OEPA, 1986). In 1989, OEPA cited ASW for failing to submit exception reports to OEPA on several waste shipments for which ASW did not receive return copies of the manifests (OEPA, 1989a). In addition, EPA issued ASW a Notice of Violation (NOV) for failing to provide land disposal restriction (LDR) notices with off-site shipments of restricted wastes (K062) and for failing to determine whether the restricted wastes exceeded applicable treatment standards (USEPA, 1990). ASW responded to both OEPA and EPA NOV's and was formally returned to compliance (OEPA, 1989b, USEPA, 1991).

ASW has various units, such as the reheat furnace, annealing furnace, natural gas compressors, grinders, and boilers, that generate air emissions and are subject to air permits (ASW, 1992a). No information was available regarding air permit compliance problems.

ASW is required to have a National Pollution Discharge Elimination System (NPDES) permit. The facility has one outfall (outfall 001) from the wastewater treatment lagoon (SWMU 1) that discharges into the Cuyahoga River (ASW, 1992a). The facility's permit (OH0002160) specifies that ASW monitor the discharge for total recoverable iron, lead, copper, zinc, nickel, and chromium; phosphorous; dissolved hexavalent chromium; water temperature; pH; oil and grease; total nonfilterable residuals; and flow rate (OEPA, 1987b). Nook Industries, a tenant at the ASW facility, has applied for a separate NPDES permit for storm-water runoff from their slag mining operations to the Cuyahoga River (ASW, 1992a).

In 1991, OEPA inspections noted releases of oily wastewater from overflow and from leakage around the headwall of the unit into the Cuyahoga River (OEPA, 1991a). ASW corrected the overflow and leakage problems by modifying the headwall and implementing operational

changes to prevent overflows (ASW, 1991b). More recent records indicate that ASW has complied with final effluent limitations for outfall 001 (OEPA, 1991d). No other violations concerning outfall 001 were identified. As of February 1991, ASW had stopped applying wastewater treatment sludge in the sludge drying beds (SWMU 2) to areas of the facility (ASW, 1991a). ASW is awaiting a permit from OEPA for this activity (ASW, 1992a).

2.6 ENVIRONMENTAL SETTING

This section describes the climate, flood plain and surface water, geology and soils, and ground water near the ASW facility.

2.6.1 Climate

Average temperatures in Cleveland range from a low of 26 degrees Fahrenheit (°F) in January to a high of 72°F in July. In summer, northern areas nearest Lake Erie are markedly colder than the rest of the area. Precipitation is well distributed during the year. Average annual precipitation is 35.4 inches, and the intensity of a 1-year, 24-hour rainfall is 2 inches. Average annual net precipitation is approximately 5.4 inches. From the late fall through winter, snow squalls are frequent and snowfall normally is heavy. Of the total annual precipitation, 60 percent usually falls between April and September. Average relative humidity in mid-afternoon is 60 percent, and the average humidity at dawn is 80 percent. The relative humidity is higher at night than during the day. The percentage of sunshine is 70 percent in the summer and 30 percent in winter. The prevailing wind direction is from the south. Average wind speed is highest, 13 miles per hour, in January (National Oceanic and Atmospheric Administration, 1990).

2.6.2 Flood Plain and Surface Water

The nearest surface waters are the Ohio Canal and the Cuyahoga River, both of which are located next to each other below the bluff on the south and west sides of the facility. Runoff at the site primarily drains to the Ohio Canal or Cuyahoga River, but runoff from manufacturing areas may also drain to the Cleveland storm-water system. The Ohio Canal and Cuyahoga River (average discharge of the River is 832 ft³/s) run parallel to each other, southeast to northwest; eventually they join Lake Erie approximately 5 miles to the northwest. Manufacturing areas of the facility are not located within the 100-year flood plain (ASW, 1992a).

2.6.3 Geology and Soils

Site-specific geology information concerning the ASW facility is limited. ASW could not provide any site-specific geologic surveys of the facility (ASW, 1992c). Surficial and subsurface soils have been altered extensively from more than 90 years of mining and steel-making activities that have occurred at the site. Slag deposits are located throughout the facility. Construction rubble and debris have also been disposed of at the site. Test boring logs near the sludge pits (SWMU 2) identified miscellaneous debris such as brick, wire, cinders, wood and mill scale in addition to silty clays within 21 feet of the surface (EEI, 1987). Soils within the manufacturing areas of the facility are a mixture of slag, natural soils, and other fill. The "slag soil" tends to be highly porous. ASW has applied dewatered sludge from the wastewater treatment lagoon to areas of the facility (approximately 24.4 acres [ASW, 1991[e]) to enhance the "slag soil" that constitutes much of the property (ASW, 1991a). Because site-specific geology is limited, regional geology in the area of ASW is discussed below.

Cuyahoga County is located in two physiographic provinces: the glaciated Allegheny Plateau of the Appalachian Plateau Province to the south and east, and the Eastern Lake and Till Plains section of the Central Lowland Province to the west and north. The line of demarcation between the two provinces is the Portage Escarpment which runs northeast - southwest, just north of Cleveland. Topography in the Allegheny Plateau is characterized by mature river valleys while the Central Lowland topography is controlled predominately by thick glacial deposits. Bordering Lake Erie is the Lake Plain area, a narrow strip averaging 4 miles and composed of lacustrine and beach ridge deposits (Leverett and Horn, 1931; White, 1982).

Two general classes of deposits exist: glacially derived unconsolidated deposits of Quaternary age and consolidated sandstone and shale of Paleozoic age. During the Pleistocene Epoch of the Quaternary period, several glaciers advanced and retreated in the region. The last glacial advances and retreats during the Wisconsin stage occurred in two distinct lobes; the Killbuck Lobe to the west and the Cuyahoga Lobe to the east (Leverett and Horn, 1931; White, 1982). Specific glacial units discussed will not be correlated to a specific lobe because several of the units were synchronous deposits and have the same general characteristics.

Associated with the glacial deposits are glacial outwash deposits of sand and gravel that are predominately located in valleys and on valley sides. The majority of the glacial deposits are heterogenous and may contain discontinuous lenses and thin sheets of sand and gravel

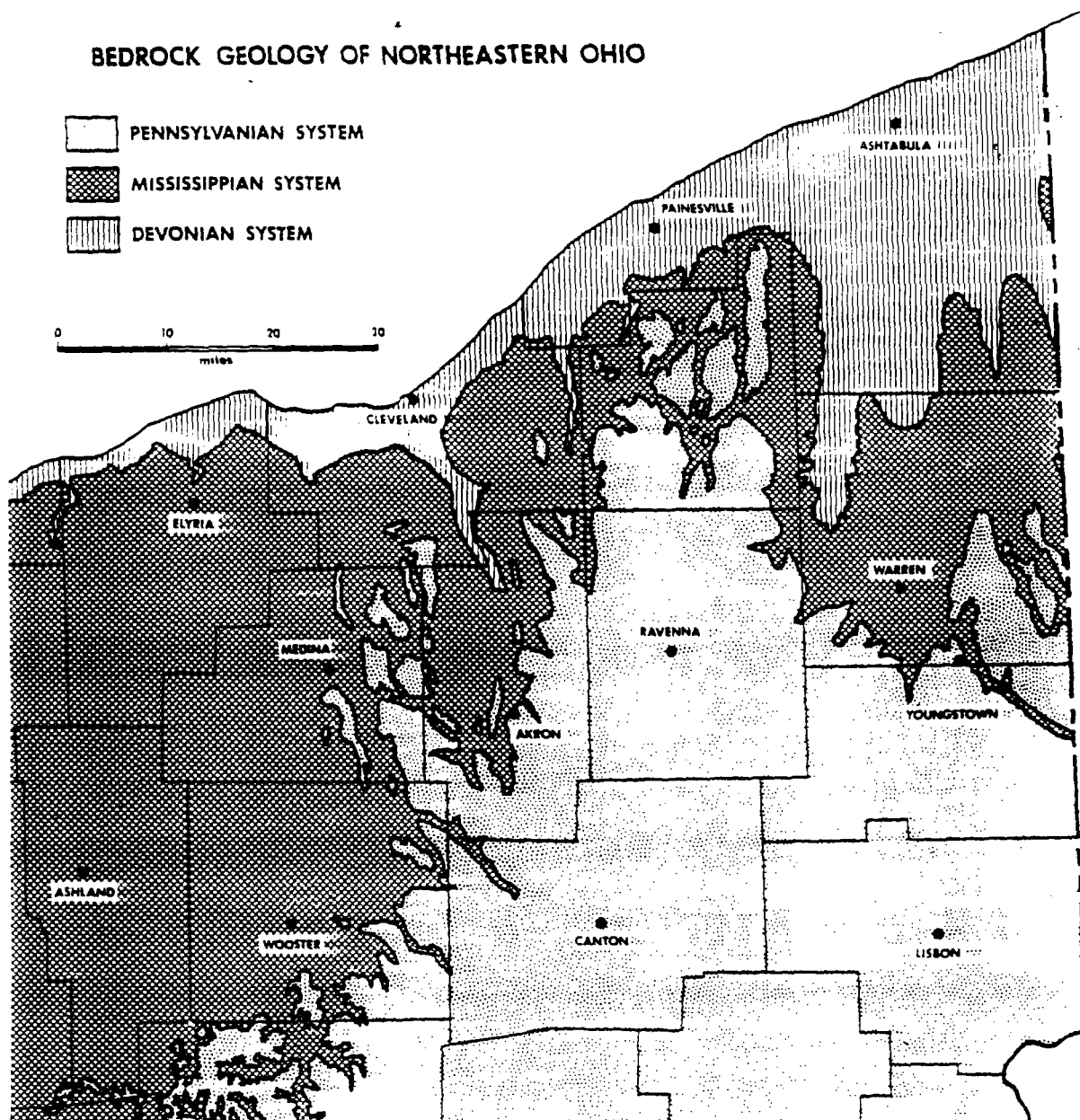
(White, 1982). Glacial deposits in the area range from 0 to 300 feet thick. South of the Lake Plain area, the upper most unit, the Hiram Till, is exposed. The Hiram Till is a clay till that ranges from 0 to 30+ feet thick. The Kent-Navarre Till underlines the previous unit and it is composed of clayey sand and silt that ranges in thickness from 0 to 100 feet. The last Wisconsin age unconsolidated unit in the area is the Mogadore-Millbrook Till which is also composed of clayey sand and silt (Banks and Feldmann, 1970; White, 1982). Pre-Wisconsin age tills and outwash deposits unconformably overlie the bedrock in deep depressional surfaces such as in buried bedrock valleys. The Pre-Wisconsin deposits are discontinuous across northeastern Ohio. These deposits are more than 60-feet thick in parts of Cuyahoga County and provide large quantities of high-grade gravel in the Mill Creek valley (White, 1982).

The bedrock units dip slightly to the south and south-southeast at about 20 feet per mile (Leverett and Horn, 1931). Devonian age bedrock is exposed in the subcrop and along river valleys along Lake Erie. Bedrock units progressively become younger to the south (Figure 3). The uppermost bedrock unit is the Sharon Conglomerate of the Pottsville Group of Pennsylvanian age. It is approximately 0 to 150 feet thick. Underlying this unit is the Cuyahoga Group of Mississippian age which is approximately 160 to 425 feet thick and is composed primarily of blue to gray shale with alternating beds of sandy shale to sandstone. Figure 4 shows these formations as they occur under the Cleveland area (Williams, 1940). Underlying the Cuyahoga Group is the Berea Sandstone which ranges from 5 to 150 feet thick. The Berea Sandstone overlies the Bedford Shale which is composed of firm to soft gray siliceous shale ranging in thickness from 50 to 90 feet. This formation overlies the Ohio Shale of Devonian age which is over 400 feet thick. The Ohio Shale formation is predominately black carboniferous shale with beds of greenish-gray shale. Underlying this unit is a series of older Paleozoic era limestones, and sandstones and shales (Leverett and Horn, 1931; Banks and Feldmann, 1970; White, 1982).

2.6.4 Ground Water

Specific information about the ground water beneath the site was not available. ASW could not provide any site-specific information on the occurrence of ground water at the facility (ASW, 1992c). As stated above, the natural soils at the site have been altered extensively by mining and steel-making operations. Undisturbed soils beneath the site consist of glacial till that may contain sources of water, especially where the glacial drift is thick and consists largely of sand and gravel. In addition, alluvial deposits near the Cuyahoga River may contain significant amounts of water; however, specific water-bearing units were not identified at the facility.

BEDROCK GEOLOGY OF NORTHEASTERN OHIO

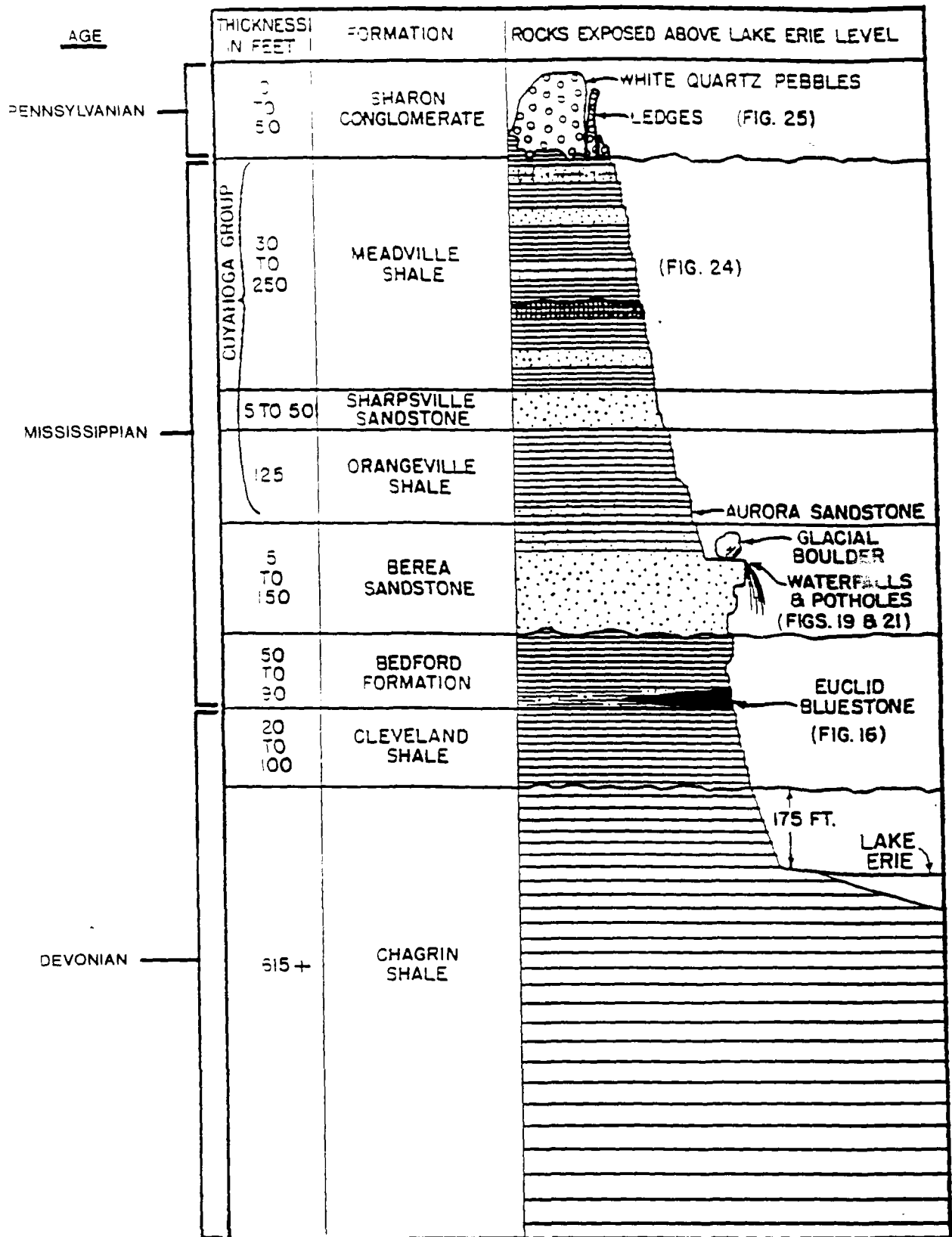


AMERICAN STEEL AND WIRE CORPORATION
CUYAHOGA HEIGHTS, OHIO

FIGURE 3
BEDROCK GEOLOGY OF
NORTHEASTERN OHIO

PMC ENVIRONMENTAL MANAGEMENT, INC.

Source: Modified from Banks and Feldman, 1970



AMERICAN STEEL AND WIRE CORPORATION
CUYAHOGA HEIGHTS, OHIO

FIGURE 4
REPRESENTATIVE GEOLOGIC
CROSS-SECTION OF THE CLEVELAND AREA

PRC ENVIRONMENTAL MANAGEMENT, INC.

Based on the topographic relief gradient, the ground-water flow is expected to be southeast to northwest, towards the Cuyahoga River. The ground-water flow rate is unknown. Because of the facility's proximity to the Cuyahoga River, depth to the ground water in the area below the bluff is expected to be several feet or less.

The use of groundwater in the county is limited to water-bearing formations within the bedrock, alluvial and glacial outwash deposits found mostly in valleys, and, to a lesser extent, sand and gravel lenses and sheets associated with the glacial drift. Existing valleys generally contain thick deposits of sand and gravel from glacial outwash. Wells in these deposits can yield up to 500 gpm. The glacial outwash has an estimated hydraulic conductivity of 10^{-3} to 10^{-1} cm/sec (Bloyd, 1974; Fetter, 1988).

The glacial deposits also may be a source of groundwater where the deposits overlie the Ohio Shale, especially where the drift is thick and contains a large percentage of sand (Leverett and Horn, 1931). The hydraulic conductivity for such aquifers is estimated to be less than 10^{-3} cm/sec (Bloyd, 1974). Water-bearing formations within the Paleozoic bedrock include the Sharon Conglomerate and Berea Sandstone. Both aquifers have an estimated hydraulic conductivity 10^{-3} to 10^{-8} cm/sec; wells in these units can yield 25 to 100 gpm (Bloyd, 1974; Freeze and Cherry, 1979). Generally, local groundwater flow in shallow glacial aquifers is controlled by surface topography, discharging into nearby rivers or lakes. The regional groundwater flow in the bedrock most likely towards the Appalachian Basin to the south (Bloyd, 1974).

2.7 RECEPTORS

The ASW facility occupies 280 acres in an industrial area in Cuyahoga Heights, Ohio. Cuyahoga Heights has a population of 707. The nearest school to the ASW facility is Harvard School, approximately 1 mile to the east. Washington Park, a Cleveland metro park, is located about 1 mile north of ASW.

The ASW facility is bordered on the north by a railroad, on the west and south by the Ohio Canal and Cuyahoga River, and on the east by East 49th Street. Other industrial activities are located surrounding the facility. A bluff paralleling the Cuyahoga River runs through the facility. Approximately 200 acres of the facility lie below the bluff. The manufacturing operations occupy 80 acres on the bluff (ASW, 1992a). Security guards, fences, and gates control access to the facility.

The Ohio Canal and Cuyahoga River are the nearest surface water bodies to the facility. The canal no longer is used for transportation, but the canal does provide water for industrial use. The Cuyahoga River provides water for industrial use and also is used for recreation.

Ground water is not known to be used for any purpose near the facility. ASW obtains water from the Ohio Canal (for industrial uses) and the city of Cleveland (for drinking water and industrial use). Cuyahoga Heights and the surrounding area obtain drinking water from the City of Cleveland; Cleveland obtains its water supplies from Lake Erie.

A wetlands area (approximately 25 acres) adjacent to the Cuyahoga River is located about 0.25 miles south of the wastewater treatment lagoon (SWMU 1). The wetlands is categorized a palustrine emergent system containing broad-leafed deciduous plants (USDI, 1977). No critical wildlife habitats were identified within 2 miles of the facility.

3.0 SOLID WASTE MANAGEMENT UNITS

This section describes the 10 SWMUs identified during the PA/VSI. The following information is presented for each SWMU: description of the unit, dates of operation, wastes managed, release controls, history of documented releases, and PRC observations. Figure 2 shows the SWMU locations.

SWMU 1

Wastewater Treatment Lagoon

Unit Description:

The wastewater treatment lagoon is located adjacent to a former canal; the canal is next to the Cuyahoga River. The unlined lagoon treats plant wastewater before it is recycled back to the mills or discharged. Oil, grease, and suspended solids (mill scale) are removed from the wastewater. The rectangular lagoon is approximately 10 to 12 feet deep and has a maximum capacity of 15 million gallons. The lagoon is surrounded on three sides by a dike made of earthen materials and slag, but the lagoon has a concrete dam at the south end near the discharge. A Parshall flume controls wastewater discharge. In addition, the lagoon is equipped with a clay liner. At three corners of the lagoon are oil skimmers and 1500-gallon steel tanks containing oil skimmed from the wastewater. A chain-link fence surrounds the impoundment (see photograph nos. 1 and 2).

Date of Startup:

The unit began operating in 1966.

Date of Closure:

The unit is active.

Wastes Managed:

The unit manages contact and noncontact wastewater generated by various plant operations. The lagoon also receives runoff from the plant. Sludge, consisting of mill scale, accumulates at the bottom of the lagoon. Analysis of dredged sludge indicated that the sludge was not EP toxic (EEI, 1987). Treated wastewater occasionally is discharged to the Cuyahoga River (average discharge 45,000 gal/day), while the sludge is periodically (approximately every 4 to 5 years) dredged and placed into drying beds (SWMU 2) (ASW, 1992a).

Release Controls:

The lagoon's embankments seemed to provide adequate protection against overtopping. The unit was equipped with a Parshall flume and a bypass system to control the discharge of wastewater to the Cuyahoga River.

History of Documented Releases:

Releases of oily wastewater from overflows and leakage around the headwall of the unit to the Cuyahoga River have been documented (OEPA, 1991a).

Observations:	The lagoon contained wastewater with a noticeable oily sheen. The lagoon's earthen embankments showed no signs of erosion, and the concrete dam was free of any cracks. Some vegetation was observed growing on sections of the earthen dikes. No discharge was observed.
SWMU 2	
Unit Description:	Sludge Drying Beds The sludge drying beds are located adjacent to the wastewater treatment lagoon (SWMU 1). The beds are used to dewater sludge removed from the lagoon. There is a total of four beds. Each bed is approximately 12 feet wide, 30 to 40 feet long, and 8 feet deep. The beds contain drainage tile to convey water back to the treatment lagoon. Approximately 10,313 cubic yards of sludge remain in the unit (ASW, 1991d). Three or four ground-water monitoring wells are located next to the beds but are not currently in use (see photograph nos. 3 and 4). OEPA required ASW to conduct some initial ground-water monitoring after construction of the beds. ASW could not provide any monitoring data -- facility representatives indicated that monitoring of the wells ceased in 1986.
Date of Startup:	The unit was constructed in 1986.
Date of Closure:	The unit is active.
Wastes Managed:	The beds manage sludge (mostly mill scale) dredged from the wastewater treatment lagoon (SWMU 1). After sufficient dewatering, ASW removes the sludge and applies it to various areas of the plant. The sludge does not exhibit the EP toxicity characteristic (EEI, 1987).
Release Controls:	The bottom of each pit contains drainage tile that conveys water (and run-on) into the wastewater treatment lagoon (SWMU 1).
History of Documented Releases:	No releases from this SWMU have been documented. ASW was required by OEPA to determine whether the dredged sludge could be releasing hazardous constituents to the environment. Analysis of sludge and soil samples in the area concluded neither the sludge nor soils was EP toxic.
Observations:	The sludge beds were covered with a light snow during the VSI; therefore, it was not possible to view the interior of the beds. Some vegetation was observed growing on the embankments of the sludge beds.

SWMU 3

Scale Pit

Unit Description:

The scale pit is located outside the south end of the rod mill. The below-grade pit is used to settle out suspended particles present in wastewater generated in the mill. The clarified wastewater then flows to the wastewater treatment lagoon (SWMU 1). The rectangular pit also has an oil skimmer that removes floating oil. The pit is made of reinforced concrete (see photograph nos. 5 and 6). A railroad siding is adjacent to the pit. ASW periodically dredges the pit with a railroad crane. The dredged material contains steel particles that are recycled at an off-site facility.

Date of Startup:

The pit was constructed in the late 1960s or early 1970s.

Date of Closure:

The unit is active.

Wastes Managed:

The unit receives wastewater from the rod mill. The wastewater contains oil and suspended particles such as steel cuttings.

Release Controls:

The unit is constructed with reinforced concrete approximately 18 inches thick.

History of Documented Releases:

No releases from this SWMU have been documented.

Observations:

The concrete sidewalls of the pit did not have any noticeable cracks. Wastewater was flowing through the pit during the VSI, so it was not possible to inspect the bottom of the pit. The pit had adequate freeboard to prevent overtopping.

SWMU 4

Former Hazardous Waste Drum Storage Area

Unit Description:

The former hazardous waste drum storage area is located near the edge of a bluff that runs across the facility. The unit formerly was used by US Steel-Cuyahoga Plant to store drums containing hazardous waste generated by the facility. The storage area consisted of a 1,250-square-foot area completely surrounded by a fence. Sealed 55-gallon drums were stored upright in a single layer on bare ground within the fenced area. The design capacity of the unit was fifty 55-gallon drums (see photograph no. 7) (USS, 1984).

Date of Startup:

The unit began operation in October 1980 (USS, 1984).

Date of Closure:

The unit has been inactive since 1984 and is undergoing RCRA closure.

Wastes Managed:

Containerized leaded steel dust (D008) and, on occasion, drums of spent pickle liquor contaminated soils (K062), were the only hazardous wastes stored in the unit. Leaded

steel dust is a finely divided powder resulting from steel grinder operations. Infrequent spills of pickle liquor on the ground may have contaminated the surrounding soils (USS, 1984). These wastes were disposed of at off site hazardous waste facilities.

Release Controls: The unit has no release controls such as pavement or berms.

History of Documented Releases: No releases from this unit have been documented.

Observations: No drums containing wastes were present in the former storage area during the VSI. A corroded and damaged empty drum was observed inside the former drum storage area. The fence surrounding the unit was in disarray. Vegetation and evidence of sampling boreholes were seen inside the former storage area.

SWMU 5

Former Hazardous Waste Tank Farm

Unit Description: The former hazardous waste tank farm is located near the edge of a bluff that runs through the facility. The tank farm formerly was used by US Steel-Cuyahoga Plant to temporarily store spent pickle liquor (K062) before the waste was shipped off site for disposal or reuse as a treatment chemical in a POTW. The tank farm consists of four 40,000-gallon carbon steel storage tanks lined with acid-resistant brick and rubber, a pump house, two fiberglass spent pickle liquor collection tanks (approximately 1,000 gallons each) and transfer pumps, rubber-lined interconnection piping, and an acid loading area. At anytime during the operating life of the tank farm, the maximum inventory of waste in storage is 162,000 gallons including the four storage tanks and fiberglass collection tanks. However, because one of the storage tanks was not working during the operation of the tank farm, the available storage capacity was 122,000 gallons instead of 162,000 gallons (USS, 1984). The four storage tanks are located on bare ground covered with crushed slag within a 70- by 100-foot partially enclosed area (see photograph nos. 8, 9, and 10).

Date of Startup: The tank farm was constructed in the late 1960s (ASW, 1992a).

Date of Closure: The unit has been inactive since 1984 and is undergoing RCRA closure.

Wastes Managed: The waste stored in the two collection tanks and carbon steel storage tanks was spent pickle liquor (K062) that primarily consisted of sulfuric and some hydrochloric acids. Besides being corrosive (pH < 2), spent pickle liquor also contained

lead and hexavalent chromium as hazardous constituents of concern. The spent pickle liquor was shipped off site for disposal by injection well or reused as a treatment chemical at a POTW. Typically, off site shipments of pickle liquor averaged about 200,000 gallons per month during the unit's active life (USS, 1984).

Release Controls:

The unit was equipped with automatic controls and manual overrides to control the loading and unloading of spent pickle liquor from the tanks. However, there was no secondary containment outside the tanks (such as berms) to prevent a release in case of tank failure.

History of Documented Releases:

No releases from this SWMU have been documented.

Observations:

All the piping at the tank farm had been dismantled or disconnected. There were no visible signs of damage or holes in the tanks to indicate that any releases had occurred. However, some of the bare ground within the tank farm area had been excavated and placed into dumpster boxes (SWMU 6) adjacent to the tank farm, suggesting that soils were contaminated from past releases.

SWMU 6

Dumpster Boxes

Unit Description:

Four steel dumpster (or roll-off boxes) are located near the former hazardous waste tank farm (SWMU 5). The boxes contain excavated soils from the tank farm area. The dumpster boxes are covered with tarps that are secured by bungee cords (see photograph no. 11).

Date of Startup:

The unit began operation in 1991 during closure of the tank farm (SWMU 5).

Date of Closure:

The unit is active.

Wastes Managed:

The unit manages potentially contaminated soils that were removed from the area surrounding the tanks that is part of the former hazardous waste tank farm (SWMU 5). Potential contaminants in the soils include hexavalent chromium and lead. The soils are being temporarily held at this location pending test results and regulatory determination of the status of the soils. The soils eventually will be disposed of off site.

Release Controls:

The dumpster boxes are fully enclosed and covered with tarps to prevent wind dispersion.

History of Documented Releases:

No releases from this unit have been documented.

Observations: The dumpster boxes were in good physical condition and the tarps covering the boxes were properly secured. No spills of potentially contaminated soil near the boxes were observed.

SWMU 7

Baghouse

Unit Description: The baghouse is located outside the rod mill. The unit is used to collect dusts from grinding and buffing operations at the mill. The unit is made of steel and powered by an induction fan that collects dust in the mill. The dust is conveyed into a small portable hopper that is underneath the unit (see photograph no. 12). The dust is transferred to a larger hopper where it is stored before shipment off site for recycling.

Date of Startup: The date the unit began operation is approximately the mid 1970s.

Date of Closure: The unit is active.

Wastes Managed: The unit manages dusts collected from grinding and buffing operations at the Rod Mill. The dust is not considered a hazardous waste for the toxicity characteristic (ASW, 1992a). Eventually, the dust is sent off site for reclamation.

Release Controls: The dust is contained within the baghouse unit. Some spillage of the dust onto soils could occur during removal of the portable hopper underlying the unit.

History of Documented Releases: No releases from this SWMU have been documented.

Observations: The unit appeared to be in sound structural shape during the VSI. No evidence of deterioration of the unit was evident.

SWMU 8

Hopper

Unit Description: The hopper is located outside the rod mill. The unit is used to collect swarf (steel dust generated from grinding operations) and other metallic dusts (such as the dusts from the baghouse (SWMU 7) that are recycled at an off-site facility. The unit is designed to contain a few cubic yards of material and is made of steel. The hopper is located on bare ground that is covered with slag (see photograph no. 13).

Date of Startup: Unknown.

Date of Closure: The unit is active.

Wastes Managed:	The unit contains swarf and other metal-bearing dusts that do not exhibit the characteristic of toxicity (ASW, 1992a). These materials are sent off site to a recycling facility.
Release Controls:	The unit has no release controls.
History of Documented Releases:	No releases from this SWMU have been documented.
Observations:	The hopper is a portable unit and probably has not been located at this location for more than several months. The hopper appeared old and was rusted and worn. However, there appeared to be no holes or other openings in the unit. The unit lacked a tarp to prevent wind dispersion of finely divided metal particles.

SWMU 9

Drum Storage Area 1

Unit Description:	A drum storage area is located inside the Old Normalizing Building. The area is used to temporarily store drums containing various used lube oils and greases. The storage area occupies approximately a 15- by 30-foot area and is situated on a concrete floor. The drums are stored on wooden pallets (see photograph no. 14).
Date of Startup:	ASW began using this area to store drums in the fall of 1991.
Date of Closure:	The unit is active.
Wastes Managed:	The unit manages drums containing various nonhazardous waste oils and lubricating greases. The oils and greases are sent to an off-site reclamation facility.
Release Controls:	The unit is located on a concrete floor inside the Old Normalizing Building. The building is constructed with cinder block and sheet metal walls.
History of Documented Releases:	No releases from this SWMU have been documented.
Observations:	The unit contained about 50 to 60 drums. Some of these drums contained scrap metal parts in addition to oils and greases. There were no visible cracks in the concrete floor. There were no floor drains within the vicinity of the unit. There were some minor spills of oil and grease near several of the drums. According to ASW, the area had never been used for drum storage before the fall of 1991.

SWMU 10

Drum Storage Area 2

Unit Description:	This drum storage area is located inside a storage room behind the engineering building. The unit is used to store
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drums containing various materials, including waste oils and greases (ASW, 1992b). The drum storage area is made of brick. It is approximately 80 feet long and 20 feet wide. There are two garage doors at either end of the brick room. The floor is concrete and walls are brick. There are no floor drains present (see photograph nos. 15, 16, and 17).

Date of Startup:	Unknown, but estimated to be at least 1986.
Date of Closure:	The unit is active.
Wastes Managed:	The unit manages drums containing various waste oils and lubricating greases generated at the facility. These wastes are sent off site to a reclamation facility. During the VSI, there were drums that belonged to USX, including several drums labeled "Hazardous Waste." These drums are believed to be painting wastes or wastes containing spent solvents (ASW, 1992a). According to ASW, they are in litigation with USX Corporation regarding the disposal of the remaining drums. ASW stated that all drums contained only nonhazardous oils and lubricating greases (ASW, 1992b).
Release Controls:	The unit is located on a concrete floor inside a brick building. The building is constructed with cinderblock and sheet metal walls.
History of Documented Releases:	No releases from this SWMU have been documented.
Observations:	The unit contained approximately 50 to 60 drums. There were no visible cracks in the concrete floor. There were no floor drains inside the building. The drums were placed directly on the floor. Some of the drums were in poor condition and appeared as if they had been stored there for some time.

4.0 AREAS OF CONCERN

PRC did not identify any AOCs during the PA/VSI. The preliminary assessment did not reveal any specific information on past releases in areas not otherwise identified as SWMUs, and no AOCs were discovered during the VSI.

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5.0 CONCLUSIONS AND RECOMMENDATIONS

The PA/VSI identified 10 SWMUs at the ASW facility. Background information on the facility's location, operations, waste generating processes, release history, regulatory history, environmental setting, and receptors is presented in Section 2.0. SWMU-specific information, such as the unit's description, dates of operation, wastes managed, release controls, history of documented releases, and observed condition, is presented in Section 3.0. AOCs are discussed in Section 4.0. Following are PRC's conclusions and recommendations for each SWMU. Table 3 summarizes the SWMUs at the ASW facility and recommended further actions.

SWMU 1 Wastewater Treatment Lagoon

Conclusions: The lagoon has been in use since 1966 to treat wastewater generated at the facility. Releases have been documented for this SWMU; however, the unit's design and operation have been modified to prevent such releases from occurring in the future. This unit has a low potential for release to air, surface water, ground water, and on-site soils. Sludge generated in this unit was determined to be non-EP-toxic (EEI, 1987). The unit does not manage volatile wastes. Operational and design changes to the unit prevent the possibility of future releases to the surface water. The unit is enclosed by a fence to prevent unauthorized access.

Recommendations: PRC recommends no further action for this SWMU.

SWMU 2 Sludge Drying Beds

Conclusions: The beds were constructed in 1986 to facilitate dewatering of sludge dredged from the wastewater treatment lagoon (SWMU 1). No releases have been documented for this SWMU. This unit has a low potential for release to air, surface water, ground water, and on-site soils. The unit does not manage volatile wastes. The sludge does not exhibit the EP toxicity characteristic (EEI, 1987). The beds also have drainage tile underneath the sludge to convey water (including run-on) to the lagoon. The beds are located in a remote area of the plant with limited access due to natural and artificial barriers.

Recommendations: PRC recommends no further action for this SWMU.

SWMU 3 Scale Pit

Conclusions: The scale pit is a below-grade concrete pit used to remove steel particles and oil from wastewater generated in the rod mill. Off-site facilities recycle steel particles and oil. No releases have been documented for this SWMU. The unit has a low potential for release to air, surface water, ground water, and on-site soils. The unit does not manage volatile wastes.

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 TABLE 3

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SWMU SUMMARY

SWMU	Operational Dates	Evidence of Release	Suggested Further Action
Wastewater Treatment Lagoon	1966 - Present	Yes	None
Sludge Drying Beds	1986 - Present	None	None
Scale Pit	Late 1960s -Present	None	None
Former Hazardous Waste Drum Storage Area	1980 - 1984	None	Sampling in accordance with OEPA-approved closure plan
Former Hazardous Waste Tank Farm	Late 1960s -Present	Yes	Sampling in accordance with OEPA-approved closure plan
Dumpster Boxes	1991 - Present	None	None
Baghouse	Mid 1970s - Present	None	None
Hopper	Unknown - Present	None	None
Drum Storage Area 1	1991 - Present	None	None
Drum Storage Area 2	Unknown - Present	None	None

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The pit is constructed of reinforced concrete that appeared in good physical condition during the VSI. The pit is located inside the facility's fenced and patrolled boundaries.

Recommendations: PRC recommends no further action for this SWMU.

SWMU 4 Former Hazardous Waste Drum Storage Area

Conclusions: USX used the former drum storage area from 1980 to 1984. US Steel stored 55-gallon drums containing leaded steel dust and contaminated soils from spent pickle liquor spills on bare ground in the area. No releases have been documented for this SWMU. The potential for release to environmental media is discussed below.

Air: Low. The wastes managed at this unit were not volatile. In addition, wastes have not been managed at this unit since 1984.

Surface Water: Low. The former drum storage area was not located near any surface water bodies or storm water sewers where a spill or other release could directly enter surface water.

Ground Water: Moderate. The unit lacked containment; spills could migrate to ground water potentially present underneath the unit.

On-site Soils: High. The unit lacked containment; containers were placed directly on bare soil. Infrequent spills may have contaminated the surrounding soils.

Recommendations: PRC recommends that sampling be conducted at the unit in accordance with the facility's approved closure plan and contaminated soils found to be excavated and disposed of offsite.

SWMU 5 Former Hazardous Waste Tank Farm

Conclusions: USX used the former tank farm from the late 1960s to 1984 to store spent pickle liquor generated at the facility. The pickle liquor was sent off site for disposal by deep well injection or use as a treatment chemical at a POTW. No releases have been documented for this SWMU. The potential for release to the environment is discussed below.

Air: Low. The wastes managed at this unit were not volatile. In addition, wastes have not been managed at this unit since 1984.

Surface Water: The former tank farm was not located near any surface water bodies where a spill or other release could directly enter the body.

Ground Water: Moderate. The unit lacked containment; spills could have migrated to ground water potentially present underneath the unit.

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On-site Soils: High. The unit lacked containment; potentially contaminated soils have been excavated as part of closure of the unit.

Recommendations: PRC recommends that sampling be conducted at the unit in accordance with the facility's approved closure plan and contaminated soils found to be excavated and disposed of offsite.

SWMU 6

Dumpster Boxes

Conclusions: Four dumpster boxes near the former tank farm (SWMU 5) contain potentially contaminated soils removed from the tank farm. The boxes serve as temporary storage for the soils until test results and determination of the soils' regulatory status are obtained. No releases have been documented for this SWMU. The unit has a low potential for releases to air, surface water, ground water, and on-site soils. The dumpster boxes are in good physical condition and covered with tarps. The contaminated soils do not contain volatile constituents. No evidence of any release of the contaminated soils from the unit was obtained during the VSI.

Recommendations: PRC recommends no further action for this SWMU.

SWMU 7

Baghouse

Conclusions: ASW operates a baghouse to remove and collect steel-bearing dusts generated during buffing and grinding operations at the rod mill. The dusts, which do not exhibit the characteristic of toxicity (ASW, 1992a), are placed in a hopper (SWMU 8), before being recycled at an area scrap metal recovery facility. No releases have been documented for this SWMU. The unit has a low potential for releases to air, surface water, ground water and on-site soils. The unit is completely enclosed. Some minor spillage could occur when the portable container beneath the baghouse is removed; however, there is a concrete pad underneath the portable container that provides containment.

Recommendations: PRC recommends no further action for this SWMU.

SWMU 8

Hopper

Conclusions: Various grinding and buffing dusts, swarf, and scrap metals are placed into a hopper located near the rod mill. The metal-bearing dusts are not toxic (ASW, 1992a) and are sent off site to a reclamation facility. No releases have been documented for this SWMU. The unit has a low potential for releases to air, surface water, ground water, and on-site soils. The unit provided adequate containment of the grinding dusts and scrap metal. During the VSI, there were no observable releases near the unit.

Recommendations: PRC recommends no further action for this SWMU.

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SWMU 9

Drum Storage Area 1

Conclusions:

ASW began using a corner of the Old Normalizing Building in the fall of 1991 to store drums containing various used oils and lubricating greases. No releases have been documented for this SWMU. The unit has a low potential for releases to the air, surface water, ground water, and on-site soils. Waste oils and greases are stored in sealed containers on top of wooden pallets. The concrete floor and walls of the building provide containment. No floor drains, sumps, or cracks in the concrete floor were observed near the drum storage area.

Recommendations: PRC recommends no further action for this SWMU.

SWMU 10

Drum Storage Area 2

Conclusions:

This storage area is located inside a small room behind the engineering building. Drums containing various waste oils and lubricating greases are stored in this room. During the VSI, ASW stated that some drums belonging to USX that contained painting or solvent wastes also were being stored in this room until they were disposed of off site (ASW, 1992a). As of August 1992 ASW was in litigation with USX Corporation regarding the disposal of the drums. No releases have been documented for this SWMU. The unit has a low potential for releases to air, surface water, ground water, and on-site soils. Containment is provided by the concrete floor and building walls. No floor drains, sumps, or cracks in the concrete floor were observed near the drum storage area.

Recommendations: PRC recommends no further action for this SWMU.

REFERENCES

- American Steel and Wire Corporation (ASW), 1986. Letter to Ohio Environmental Protection Agency (OEPA) regarding a notification of hazardous waste activity, (December 10).
- ASW, 1989. Letter to OEPA regarding findings of RCRA inspection, (November 10).
- ASW, 1991a. Letter to OEPA regarding annual inspection of the wastewater treatment facility, (April 17).
- ASW, 1991b. Letter to OEPA regarding NPDES violations, (June 10).
- ASW, 1991c. Letter to OEPA regarding NPDES violations, (July 1).
- ASW, 1991d. Letter to OEPA regarding sludge remaining in the dewatering facility, (October 31).
- ASW, 1991e. Letter to OEPA regarding location and acreage of sludge application areas, (December 16).
- ASW, 1992a. Statements obtained from ASW representatives during PRC Environmental Management, Inc. (PRC) VSI at ASW facility, (February 12).
- ASW, 1992b. Telephone conversation between Chris Zielinski (ASW) and Dave Phillips (PRC), (July 9).
- ASW, 1992c. Letter (and attachments) from Chris Zielinski (ASW) to Dave Phillips (PRC), (July 17).
- Envisage Environmental, Incorporated (EEI), 1987. Sampling and Analysis of Dewatering Basin, (May 15).
- National Oceanic and Atmospheric Administration (NOAA), 1990. Normals, Means and Extremes.
- Ohio Environmental Protection Agency (OEPA), 1986. Letter to ASW regarding RCRA inspection of the facility, (December 3).
- OEPA, 1987a. Letter to USX regarding RCRA closure of USX/USS Cuyahoga Works, (April 28).
- OEPA, 1987b. Director's Final Findings and Orders, (May 5).
- OEPA, 1987c. Letter to USX regarding the approval of the facility's closure plan, (November 2).
- OEPA, 1989a. Letter to ASW regarding violations found during RCRA inspection, (August 14).
- OEPA, 1989b. Letter to ASW regarding compliance with violations noted during RCRA inspection, (November 15).
- OEPA, 1991a. Letter to ASW regarding sampling conducted at the wastewater treatment facility, (April 19).

REFERENCES (continued)

- OEPA, 1991b. Letter to USX Corporation regarding receipt of a closure plan for a hazardous waste storage area, (August 22).
- OEPA, 1991c. Letter to ASW regarding a closure plan for a hazardous waste storage tank, (November 14).
- OEPA, 1991d. Letter to ASW regarding an inspection of the waste water treatment facility, (November 26).
- United States Department of Interior (USDI), 1977. National Wetlands Inventory, (March).
- United States Environmental Protection Agency Region 5 (USEPA), 1987. Letter to USX Corporation regarding receipt of the facility's closure plan, (December).
- USEPA, 1990. Letter to ASW regarding violations found during RCRA inspection, (August 27).
- USEPA, 1991. Letter to ASW regarding compliance with violations found during RCRA inspection, (January 18).
- United States Geological Survey (USGS), 1984. Topographic map, Cleveland South Quadrangle, Ohio.
- United States Steel (USS), 1980. RCRA part A permit application submitted to USEPA on November 17.
- USS, 1982. Amended RCRA part A permit application submitted to USEPA on May 22.
- USS, 1984. Letter to OEPA regarding an amended closure plan, (May 2).

ATTACHMENT A

EPA PRELIMINARY ASSESSMENT FORM 2070-12



POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 1 - SITE INFORMATION AND ASSESSMENT

I. IDENTIFICATION

01 STATE OH 02 SITE NUMBER OHD004220810

II. SITE NAME AND LOCATION

01 SITE NAME (Legal, common, or descriptive name of site) American Steel and Wire Corporation	02 STREET, ROUTE NO. OR SPECIFIC LOCATION IDENTIFIER 4300 East 49th Street				
03 CITY Cuyahoga Heights	04 STATE OH	05 ZIP CODE 44125	06 COUNTY Cuyahoga	07 COUNTY CODE	08 CONG DIST
09 COORDINATES: LATITUDE 41°20'37"		LONGITUDE 81°39'44"			
10 DIRECTIONS TO SITE (Starting from nearest public road) From Cleveland Hopkins International Airport take Interstate 480 east to Interstate 77. At the intersection take Interstate 77 north to Harvard. Take Harvard west to East 49th Street. Go south on E.49th; ASW is on the right.					

III. RESPONSIBLE PARTIES

01 OWNER (if known) American Steel and Wire Corporation	02 STREET (Business, mailing residential) 4300 East 49th Street				
03 CITY Cleveland	04 STATE OH	05 ZIP CODE 44125	06 TELEPHONE NUMBER (216) 883-3800		
07 OPERATOR (if known and different from owner)		08 STREET (Business, mailing, residential)			
09 CITY	10 STATE	11 ZIP CODE	12 TELEPHONE NUMBER		
13 TYPE OF OWNERSHIP (Check one) <input checked="" type="checkbox"/> A. PRIVATE <input type="checkbox"/> B. FEDERAL: _____ (Agency Name) <input type="checkbox"/> C. STATE <input type="checkbox"/> D. COUNTY <input type="checkbox"/> E. MUNICIPAL <input type="checkbox"/> F. OTHER _____ (Specify) <input type="checkbox"/> G. UNKNOWN					
14. OWNER/OPERATOR NOTIFICATION ON FILE (Check all that apply) <input checked="" type="checkbox"/> A. RCRA 3010 DATE RECEIVED: 12 / 10 / 86 <input type="checkbox"/> B. UNCONTROLLED WASTE SITE (CERCLA 103 c) DATE RECEIVED: ____ / ____ / ____ <input type="checkbox"/> C. NONE MONTH DAY YEAR MONTH DAY YEAR					

IV. CHARACTERIZATION OF POTENTIAL HAZARD

01 ON SITE INSPECTION <input checked="" type="checkbox"/> YES DATE 2 / 12 / 92 <input type="checkbox"/> NO BY (Check all that apply) <input type="checkbox"/> A. EPA <input checked="" type="checkbox"/> B. EPA CONTRACTOR <input type="checkbox"/> C. STATE <input type="checkbox"/> D. OTHER CONTRACTOR <input type="checkbox"/> E. LOCAL HEALTH OFFICIAL <input type="checkbox"/> F. OTHER: _____ (Specify) CONTRACTOR NAME(S): PRC Environmental Management, Inc.		02 SITE STATUS (Check one) <input checked="" type="checkbox"/> A. ACTIVE <input type="checkbox"/> B. INACTIVE <input type="checkbox"/> C. UNKNOWN		03 YEARS OF OPERATION Early 1900s Present <input type="checkbox"/> UNKNOWN BEGINNING YEAR ENDING YEAR	
04 DESCRIPTION OF SUBSTANCES POSSIBLY PRESENT, KNOWN, OR ALLEGED Spent pickle liquor, soils potentially contaminated with hexavalent chromium and/or lead, spent solvents					
05 DESCRIPTION OF POTENTIAL HAZARD TO ENVIRONMENT AND/OR POPULATION Facility is an active plant manufacturing steel rods and wires. Facility operates a wastewater treatment lagoon and treatment sludge drying beds. Previous owner is conducting RCRA closure of container storage area and tank farm. Potential is low for any releases to the environment from waste management units on site.					

V. PRIORITY ASSESSMENT

01 PRIORITY FOR INSPECTION (Check one. If high or medium is checked, complete Part 2 - Waste Information and Part 3 - Description of Hazardous Conditions and Incidents.) <input type="checkbox"/> A. HIGH (Inspection required promptly) <input type="checkbox"/> B. MEDIUM (Inspection required) <input type="checkbox"/> C. LOW (Inspect on time-available basis) <input checked="" type="checkbox"/> D. NONE (No further action needed; complete current disposition form)			
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VI. INFORMATION AVAILABLE FROM

01 CONTACT Kevin Pierard	02 OF (Agency/Organization) U.S. EPA Region 5			03 TELEPHONE NUMBER (312) 886-4448	
04 PERSON RESPONSIBLE FOR ASSESSMENT David Phillips	05 AGENCY	06 ORGANIZATION PRC-EMI	07 TELEPHONE NUMBER (703) 883-8886	08 DATE 03 / 30 / 92 MONTH DAY YEAR	

ATTACHMENT B
VISUAL SITE INSPECTION SUMMARY AND PHOTOGRAPHS

VISUAL SITE INSPECTION SUMMARY

American Steel and Wire Corporation
Cuyahoga Heights, Ohio
OHD 004 220 810

Date: February 12, 1992

Facility Representatives: John Mack, Manager - Environmental Affairs
Chris Zielinski, Engineering

Inspection Team: Dave Phillips, PRC Environmental Management, Inc. (PRC)
Deborah Lyne, PRC

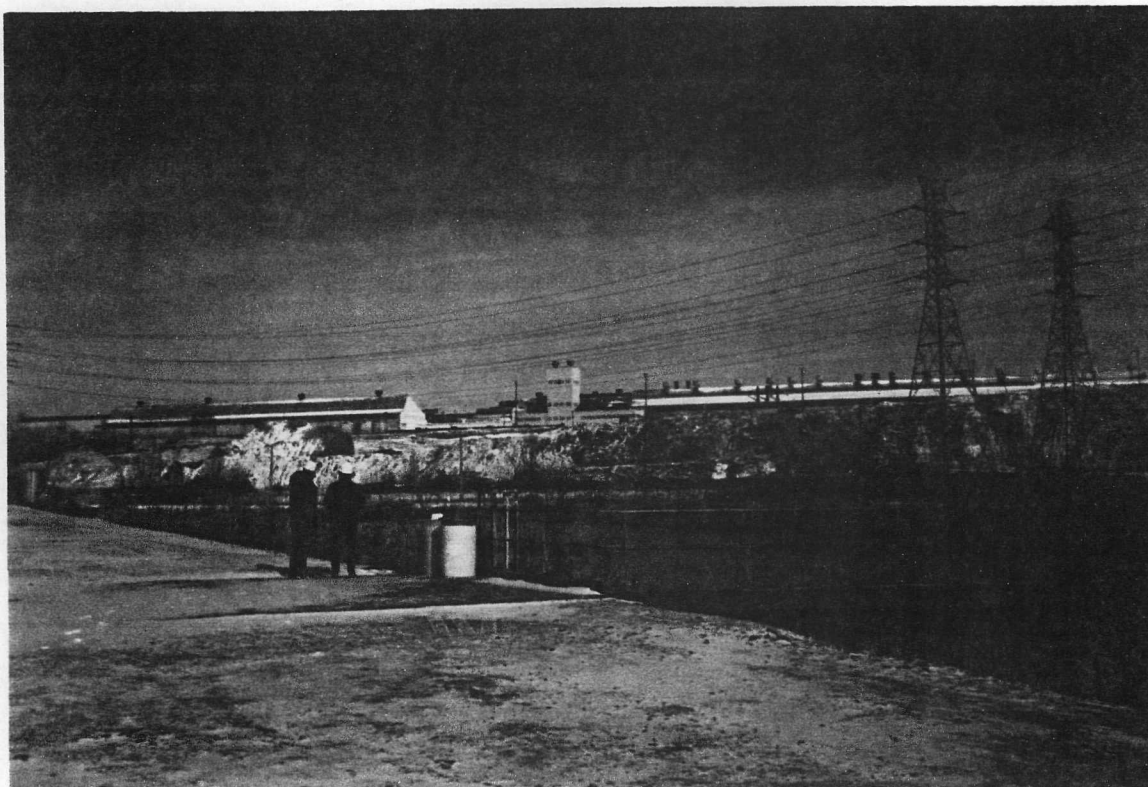
Photographer: Deborah Lyne

Weather Conditions: Partly sunny, occasional light snow flurries, temperature about 25°F

Summary of Activities: This visual site inspection (VSI) began at 8:45 a.m. with an introductory meeting. The inspection team discussed the purpose of the VSI and the agenda for the visit. Facility representatives then discussed the ASW facility's past and current operations, solid and hazardous wastes generated, regulatory status, and release history. Most of this information was exchanged on a question-and-answer basis. ASW representatives provided the inspection team with copies of documents that the team had requested.

The VSI tour began at 10:05 a.m. The tour began with the inspection team viewing the wastewater treatment lagoon and sludge drying beds. These units were located farthest away from the main areas of the plant and adjacent to the Ohio canal and Cuyahoga River. The tour proceeded to the rod mill where the inspection team observed the scale pit and also viewed the manufacturing of wire products. ASW representatives then escorted the inspection team to the former hazardous waste drum storage and tank farm units. Both units were outside the rod mill near the edge of a bluff. The inspection team identified the dumpster boxes containing excavated soils from the tank farm in this area. The tour moved inside the rod mill to examine an acid regeneration unit which was recently installed at the facility to reclaim spent pickle liquor. The tour then proceeded to the east side of the rod mill and the old normalizing building where the inspection team observed the baghouse, hopper, and drum storage Area 1 SWMUs. ASW representatives and the inspection team finished the tour behind the engineering building, which was the site of drum storage area 2.

The tour ended at 11:48 a.m., after which the inspection team held an exit meeting with the ASW representatives. The VSI was completed and the inspection team left the facility at 12:05 p.m.



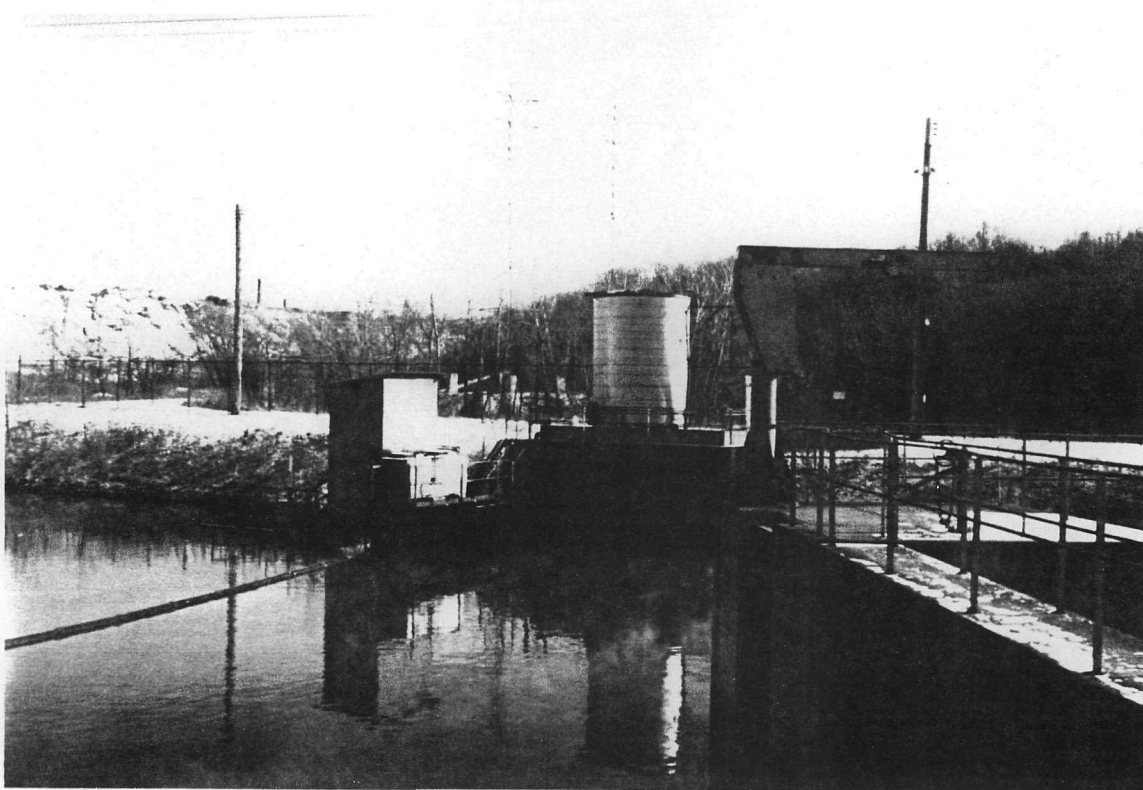
Photograph No. 1

Orientation: North

Description: View of the wastewater treatment lagoon. The man-made bluff (primarily composed of slag) is in the background.

Location: SWMU 1

Date: February 12, 1992



Photograph No. 2

Orientation: East

Description: One of the three oil/water skimmers used at the wastewater treatment lagoon. Concrete dam is shown in foreground.

Location: SWMU 1

Date: February 12, 1992



Photograph No. 3

Orientation: Northwest

Description: View of the sludge drying beds. Sludge from the wastewater treatment lagoon was placed into excavated pits.

Location: SWMU 2

Date: February 12, 1992



Photograph No. 4

Orientation: Northwest

Description: Another view of the sludge drying beds.

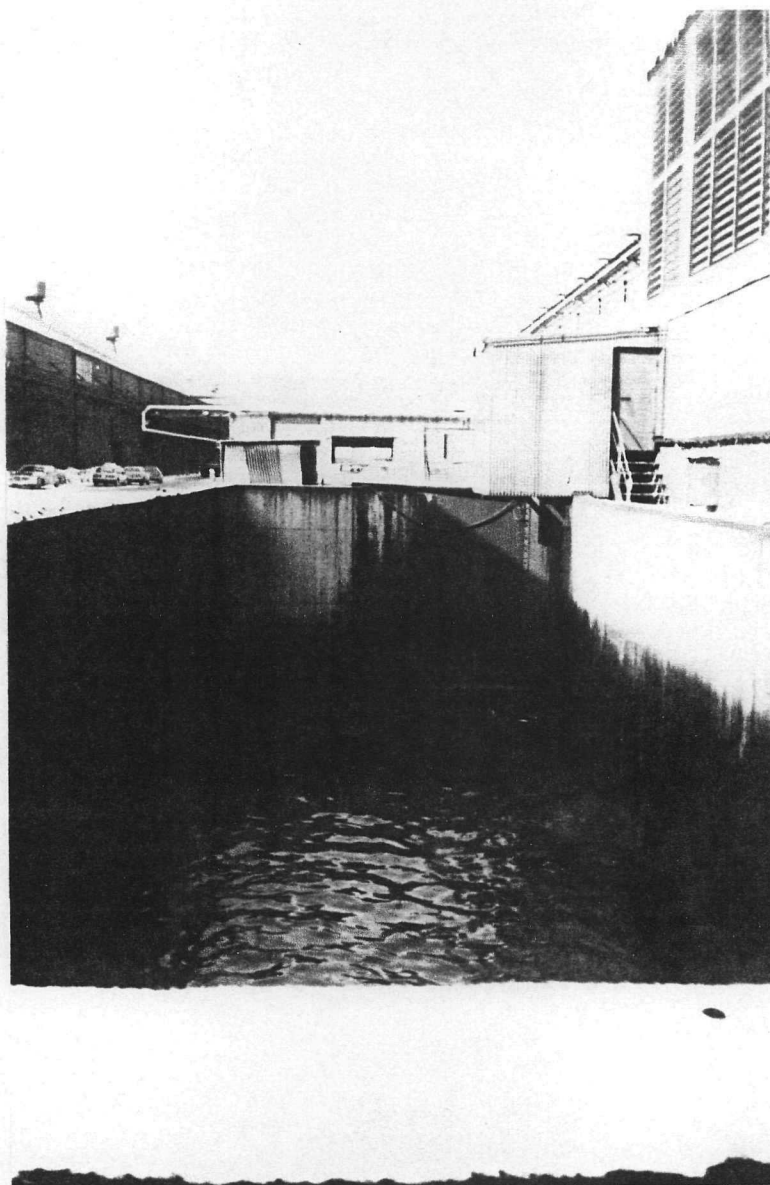
Location: SWMU 2

Date: February 12, 1992



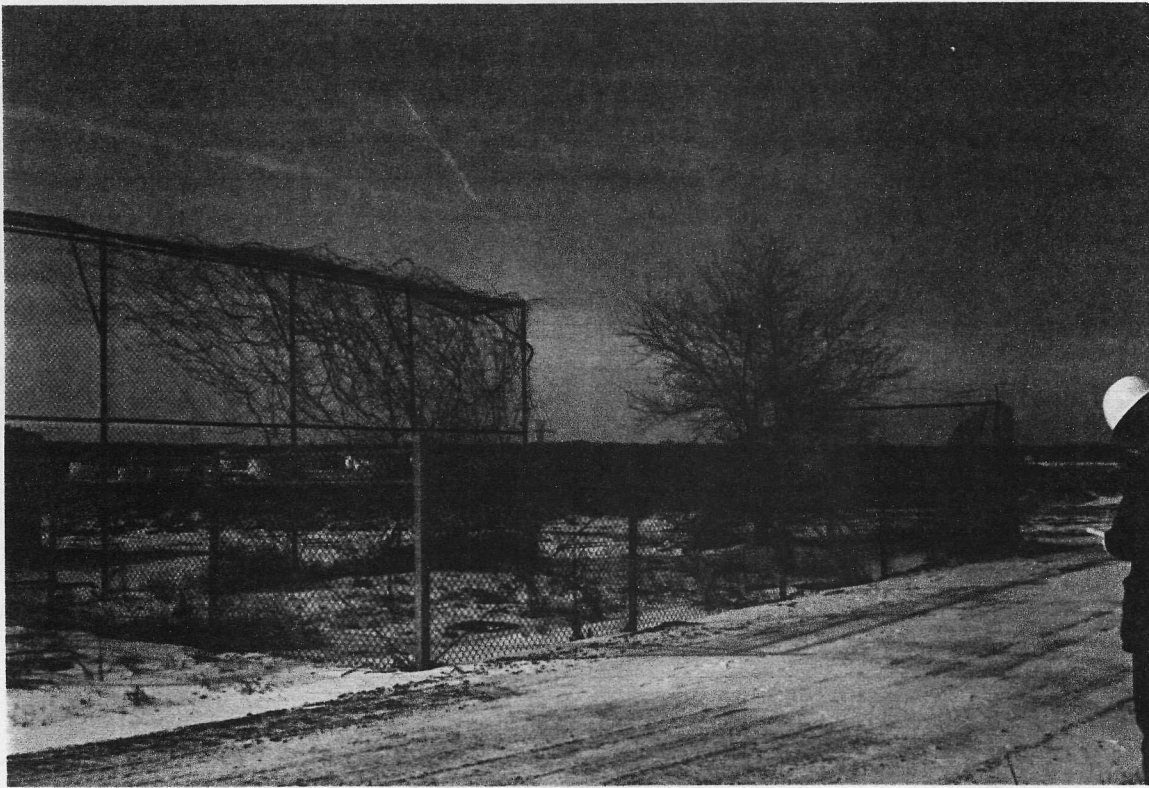
Photograph No. 5
Orientation: West
Description: Top of the scale pit.

Location: SWMU 3
Date: February 12, 1992

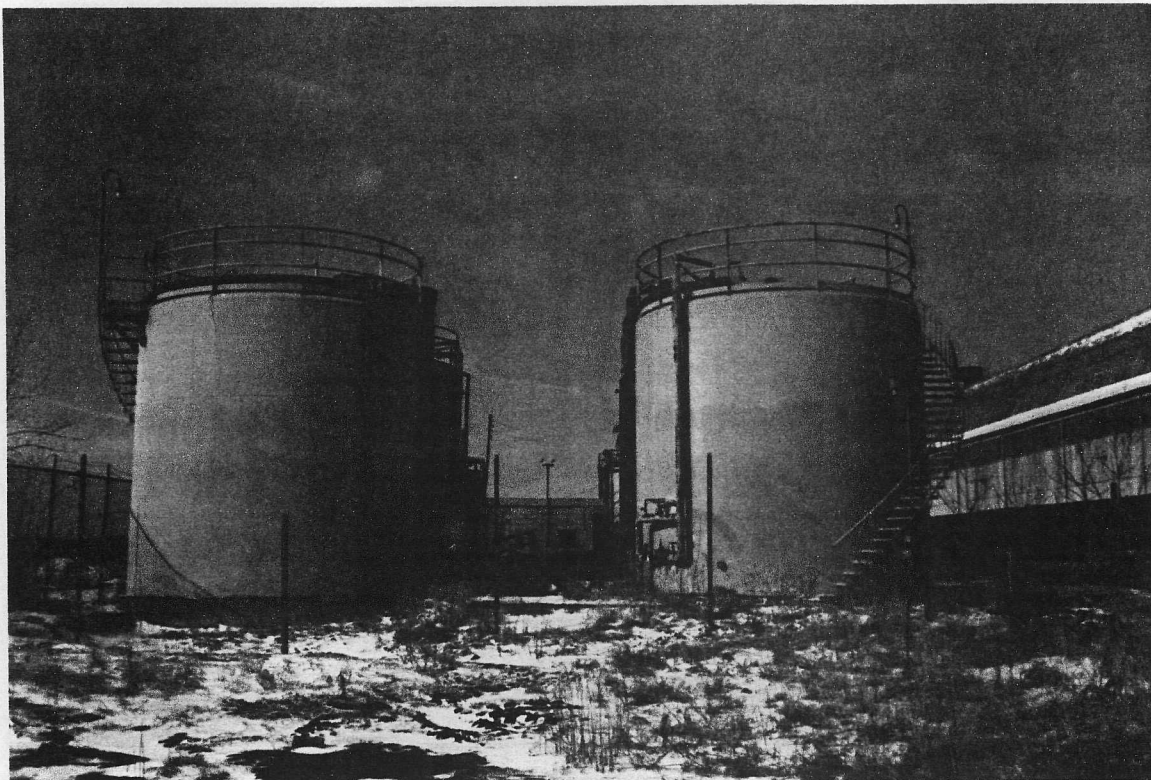


Photograph No. 6
Orientation: West
Description: Inside of the scale pit.

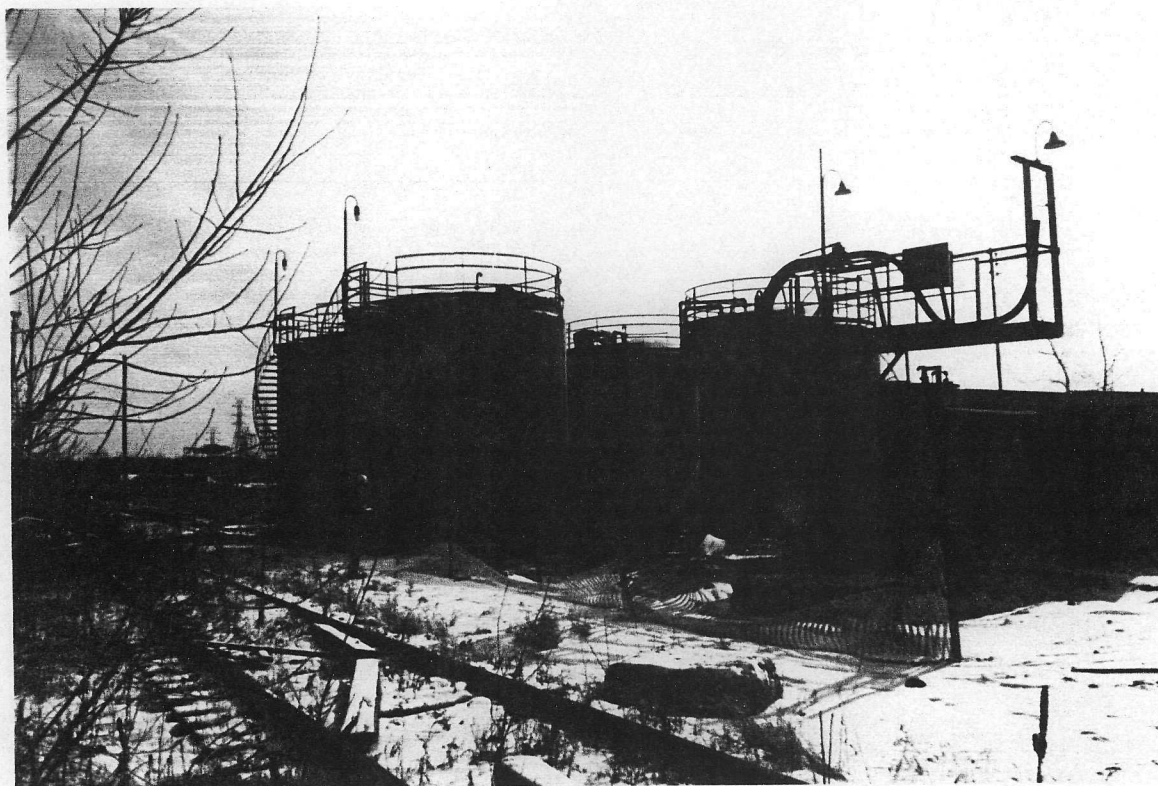
Location: SWMU 3
Date: February 12, 1992



Photograph No. 7 **Location:** SWMU 4
Orientation: Southwest **Date:** February 12, 1992
Description: View of the former hazardous waste drum storage area used between 1980 and 1984.



Photograph No. 8 **Location:** SWMU 5
Orientation: West **Date:** February 12, 1992
Description: View of the former hazardous waste tank farm.



Photograph No. 9
Orientation: Southeast
Description: Another view of the former hazardous waste tank farm. Note the excavation and removal of soils surrounding the storage tanks.

Location: SWMU 5
Date: February 12, 1992



Photograph No. 10
Orientation: East
Description: View of the former hazardous waste tank farm. The cinder block building is the pumphouse.

Location: SWMU 5
Date: February 12, 1992



Photograph No.	11	Location:	SWMU 6
Orientation:	Southwest	Date:	February 12, 1992
Description:	Dumpster boxes containing potentially contaminated soils excavated from the former hazardous waste tank farm (SWMU 5).		

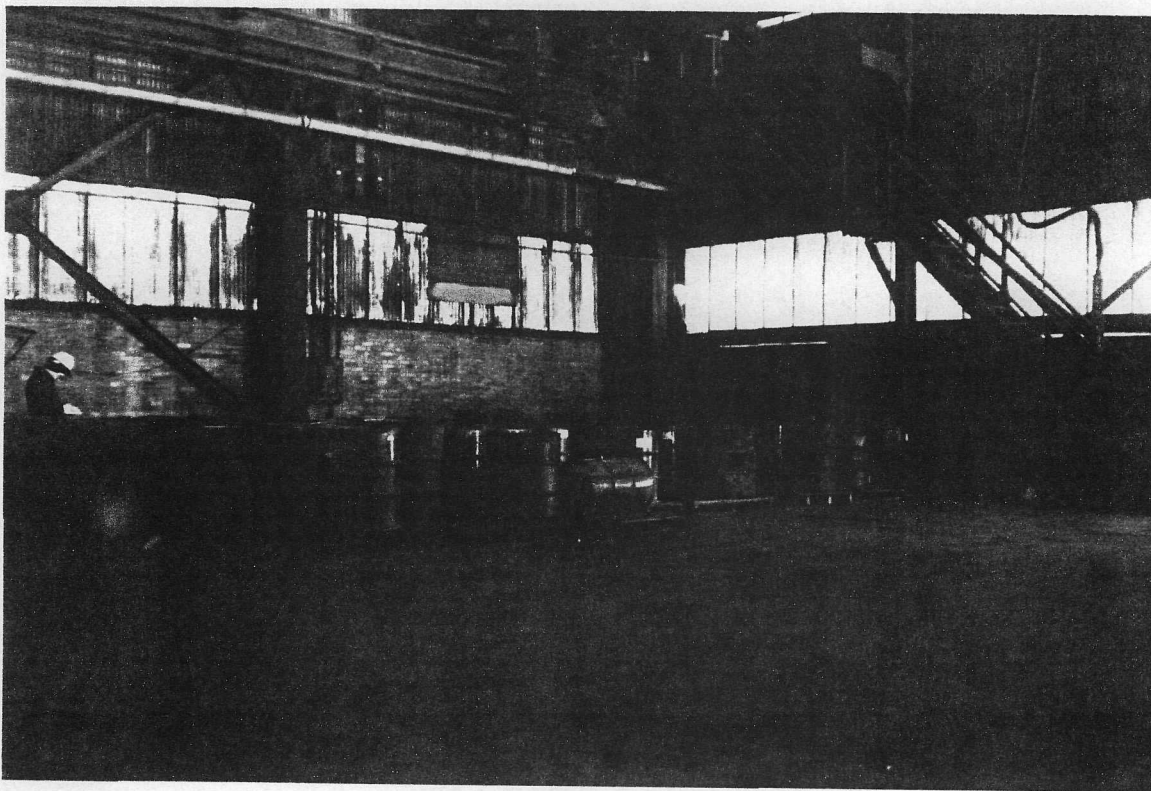


Photograph No. 12
Orientation: West
Description: View of the baghouse located outside the rod mill.

Location: SWMU 7
Date: February 12, 1992



Photograph No. 13 **Location:** SWMU 8
Orientation: North **Date:** February 12, 1992
Description: Hopper containing swarf, scrap metals, and other metal-bearing dusts.

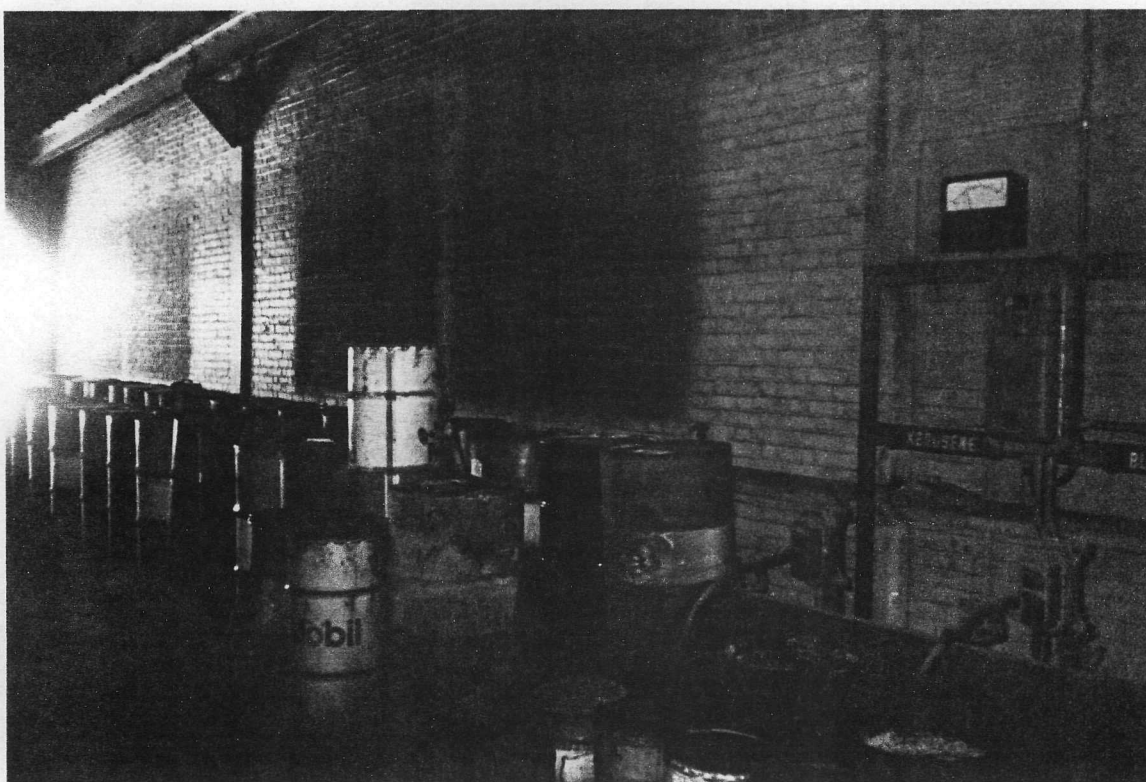


Photograph No. 14 **Location:** SWMU 9
Orientation: Northeast **Date:** February 12, 1992
Description: View of drum storage area 1 located inside old normalizing building.



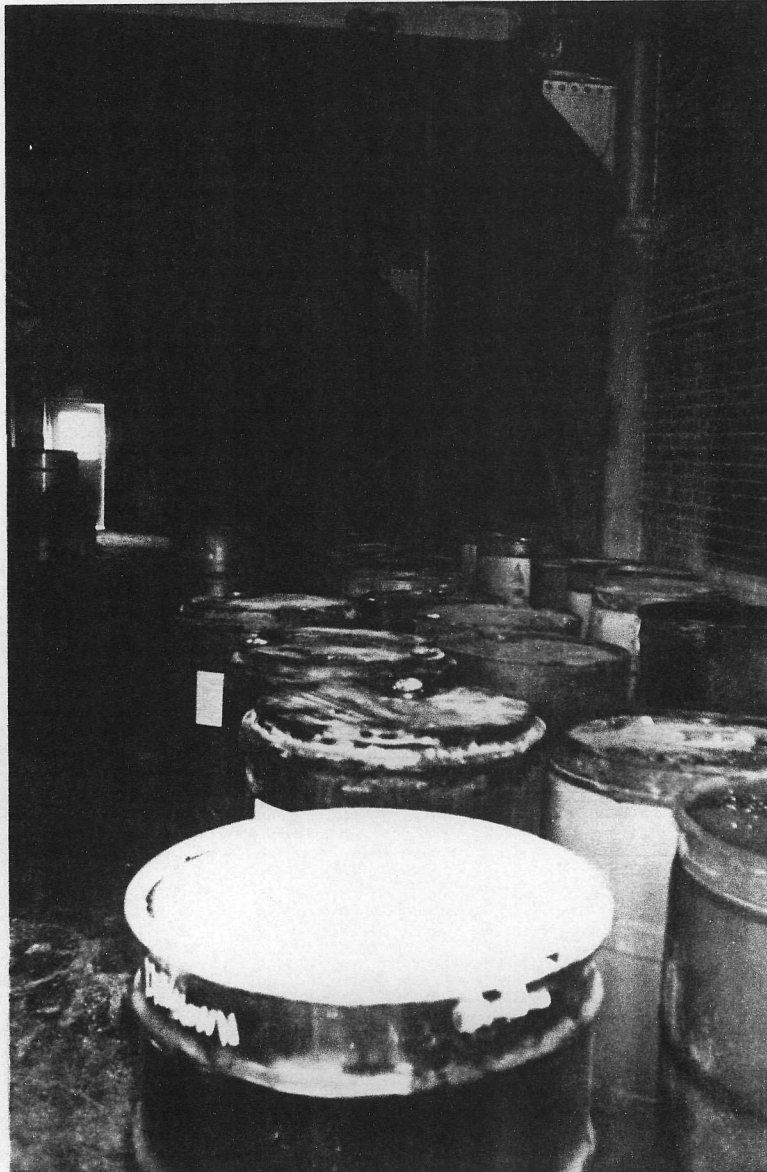
Photograph No. 15
Orientation: East
Description: View of drum storage area 2.

Location: SWMU 10
Date: February 12, 1992



Photograph No. 16
Orientation: Northwest
Description: Another view of drum storage area 2; note the corroded drums.

Location: SWMU 10
Date: February 12, 1992



Photograph No. 17
Orientation: East
Description: View of containers located in drum storage area 2.

Location: SWMU 10
Date: February 12, 1992

ATTACHMENT C
VISUAL SITE INSPECTION FIELD NOTES

(120)

2-12-92

D8

Arrived at facility at 8:45 AM

ASW rep.-John Mack

ASW rep.-Chris Zielinski

PRC ENE-Dave Phillips

PRC ENE-Deb Lyne

Temp. Mid 20°F's - Partly Sunny

Held pre-briefing at 8:50 AM

History of Facility

Originally built in early 1900s

by ASW a subsidiary of US Steel

ASW & US Steel in 1984. Entire
operation shut down in 1984.

Plant reopened in July 1986

by ASW (completely separated
from US Steel).280 acres total - 80 acres on
blough1400 ^{PSP} acres employees

12 tenants at the facility

(1) Nook Industries. (after 1986 87-88)

(2) Gibraltar Strip Steel (1987)

2-12-92

D8

(121)

Current Operations

Rod Mill

Wire Mill + Cleaning house

Rod Mill Operations

Billets

heated

rolled
mill2 grinders equipped
w/ baghousesproduct
(sold off site or used
as raw material at
the wire mill)Wire Mill Operation

Clean, coated, annealed or drawn

Pickling operations
~~Other Plant Buildings & Operations~~
- Metallurgy Lab, Administrative
building, Warehousing

D8

(122)

2-12-92

D8

Waste generation OperationsWaste H₂O's

→ Contact and Non Contact Waters (99% recycled)

Water goes to the WWT lagoon for oil skimming and discharge

Avg. Discharge 45,000 gal/day

Sludge in lagoon (Nonhazardous) dredged periodically (once every 4 or 5 years) stored in sludge drying bed - eventually apply sludge to areas w/in the plant

Scale pit precedes lagoon - used to settle steel particles out of wastewater. The particles are recycled.

2-12-92

D8

(123)

Storm water runoff is directed to the WWT lagoon also.

One discharge point at facility for discharge from lagoon

- One tenant is mining former slag deposits - have applied for a NPDES storm water runoff permit for H₂O that wouldn't enter lagoon.

Cleaning house generates a waste water that is neutralized (pH adjustment) in a pit prior to discharge to the city POTW

Air permitsReheat Furnance, Boilers, Grinders
Annealing furnance, natural gas
air compressors

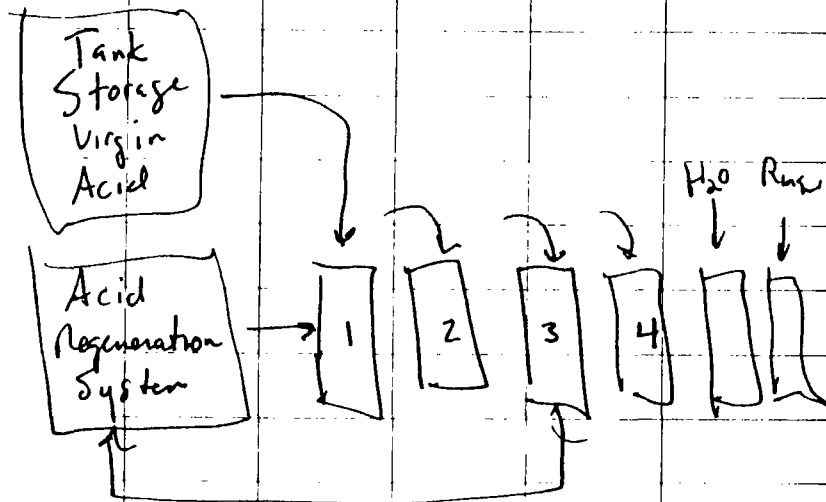
(124)

2-12-92 D80

Spent Pickle Liquor K062

Facility has an acid-regeneration system

Sludge generated from these tanks is disposed off-site



Periodical (Twice/yr) the sludge or deposits in the bottom of the tank are vacuummed out and disposed off-site. Sludge is deep-welled injected

2-12-92 D80

(125)

Solvents

S.K. program parts washers associated with machine/maintenance shops and operations

Metal Wastes

Dust, swarf, particulate matter scrap metal (etc.) collected in a hopper and sent off-site for reclamation.

Waste Oil

Oil skimmer produces oil that is held in tanks; other oils are collected in containers sent off-site for reclamation - 2 storage areas

Some of the oil is regenerated as a lubricant, other oil may be recycled for fuel blending purposes.

(126)

D8P

2-12-92

2 - PCB transformer in service

No central accumulation area

Asbestos removal program on-going at the facility

Drum Storage Area & Spent

Pickle Liquor tank farm are being closed by USS under a court order. Implemented through a closure plan.

Tank Farm Clean-Up

4-5 roll off boxes containing soils removed as part of closure - awaiting determination of regulatory status of soils by OEPA

D8P

2-12-92

(127)

Drum Storage Area and Tank

Farm have been out of service

since 1984. Tank farm was constructed in the late 1960s.

2 Waste Oil Drum Storage Areas

one inside a warehouse

both are enclosed under roof w/

a concrete pad

generation / storage rate of less

than 100 drums at any given time

Wastewater Lagoon

Built in 1966 - clay lined

Scale pit built in ^{D8P} the 1955

concrete pit w/ 2 baffles

3 oil skimmers w/ the lagoon

1 oil skimmer w/ the scale pit

(128)

D8

2-12-92

Regulatory status:

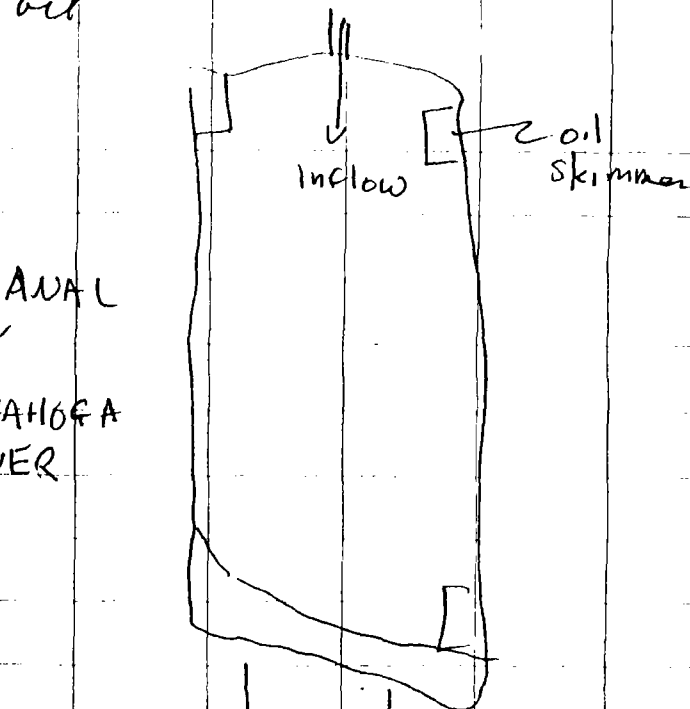
- Currently an episodic generator of SPL and SK solvents -

Only store waste oils on-site

- 3 UST holding kerosene or fuel oil for use at the facility

Currently it's believed USS is responsible for the tanks.

Big - Silver tanks are not used.
Small 1500 gal. tank collect the



Concluded Briefing at 1000 AM

Began tour of facility at 1005 AM

WWTU Lagoon

Clay lined - built in 1960s

15,000,000 gal capacity

10-12 ft deep - rectangular

Oil Skimmers / Collection tanks

D8
2-12-92

(129)

2-12-92

(130)

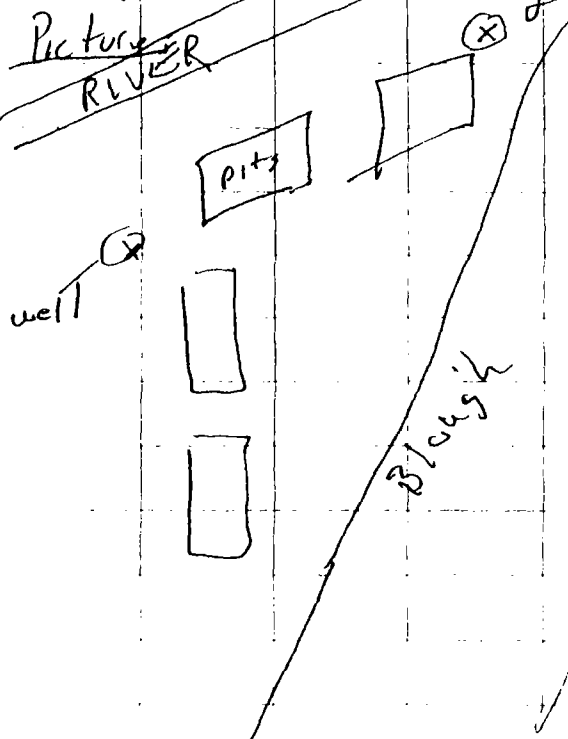
D8P 2-12-92

Sludge Drying Beds

- 8 ft deep 12-15 ft wide
 - equipped w/ drainage tile
 - ground H_2O wells originally
 - not used recently
- Treatment pond
Dredged in 1986

- Pits built in 1986

- May be lined w/ clay

Picture
RIVER

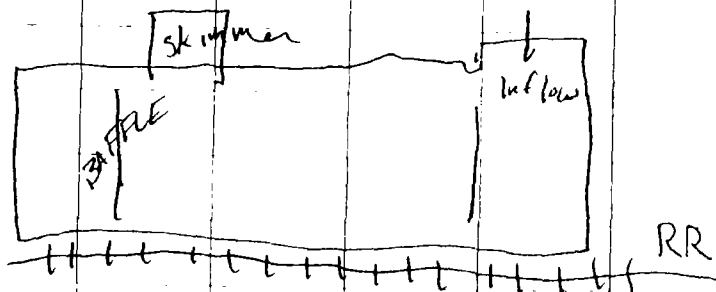
D8P

2-12-92

(131)

Scale Pit

- Rectangular - useable head space 10 ft
- Oil Skimmer point on one side

Waste H_2O comes from the Rod MillRailroad crane w/ clamshell
removes depositsHazardous Waste Drum Storage AreaSoil floor - boring holes from
sampling present
area nearly enclosed by a fence

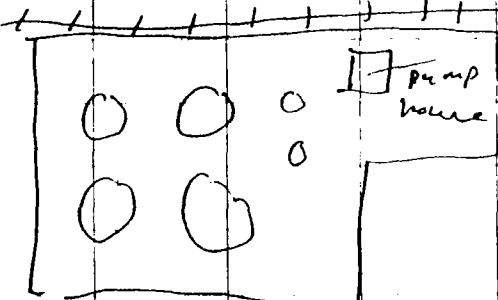
(132)

288 2-12-92

Former H.W. Tank Farm

Certain areas have been excavated

6 tanks - brick lined



dumpsters

partially fenced

Not used since at least 1984

Undergoing closure

Large tanks \approx 20 ft high

Small tanks \approx 12 ft high

HCl and Sulfuric acid

Tanks have cement/concrete base

No secondary containment

- Dumpster boxes containing excavated soils

DB 2-12-92

(133)

Reclaim System for Pickle Acid

Viewed system inside building
paved floor - did not take any pictures - system produce ferrous sulfate which is sold as a raw material

Hoppers containing grinding swarf - eventually recycled offsite

Baghouse

Used to collect dusts from grinding and buffing operation in Rod Mill

Drum Storage Area in Old Normal Building

Waste grease and Lube Oil
Concrete pad; no drain

Drums are on wooden pallets
Some spillage noted

(134) DSP 2-12-92

Area used since last Full '91
No central accumulation area
used before

About 50-60 drums present
some drums contained various
scrap metal (i.e., parts, pieces)

Other Waste Oil Drum Storage Area

Several drums contain hazardous
waste - area paved - enclosed

No sumps or drains
Concrete floor - 60-90 drums
present.

Most drums contain oil
Some drums still belong to USX

Concluded tour of facility at
11:48 AM - Began Exit Briefing
at 11:50 AM

DSP 2-12-92

(135)

Concluded Briefing of facility
representatives at 11:00 Noon
Left 1... at 12:15 PM

Joseph M. Markiw
Manager, Engineering



American Steel & Wire
Corporation

4300 East 49th Street
Cuyahoga Heights, Ohio 44125
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Christopher Zielinski
Engineering



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John J. Mack, JD-MSES
Manager, Environmental Affairs



American Steel & Wire
Corporation

4300 East 49th Street
Cuyahoga Heights, Ohio 44125
Direct Dial: (216) 429-7692

25

2/18/92

DB

AMERICAN STEEL AND WIRE

8:40 A.M.

JOHN MACK

CURTIS ZIGLINSKY

JOSEPH MACKIN (NOT PRESENT)

PRL DEBORAH LYNE

DAVE PHILLIPS

~~DB~~

EARLY 1900'S WYANDOTA MILLS

OWNED BY AMER. STEEL CO.

SOLD TO US STEEL - 1984 -

FACILITY SHUT DOWN. REOPENED

JULY '86 - AMER. STEEL + WIRE

BUT NOT PART OF US STEEL.

280 TOTAL ACRES - 80 ACRES

WHERE PLANT LOCATED - OTHER

PART LOWE LAGOON, FACILITY

PUMP HOUSE

2/18/92

26

400 EMPLOYEES ON SITE -

580 TOTAL WRP

- TWO TENANTS - NOOK INDUSTRIES

+ GIBRATOR STRIP STEEL.

ONE IN THIS BLDG OTHER

IN OLD ROLL BLDG

GIBRATOR - 1987 OCCUPANCY.

NOOK - 1987-88 OCCUPANCY.

~~DB~~

- CURRENT OPERATING PROCESS

SINCE 1984 - MANY PORTIONS

NO LONGER IN OPERATION

ROB MILL - PRODUCING MORE

WIRE MILL - PRODUCING LESS

- CLEANING HOUSE AS PART OF

WIRE MILL

~~DB~~

27 2/12/92 DBL

ROD MILL + WIRE MILL

5.5.30G BILLETS HEATED,

ROLL DOWN TO VARIOUS DIA.

PRODUCT - SOME SHIPPED SOME

SENT TO WIRE MILL FOR

CLEANING, COATING OR

ANNEALING.

- WIRE MILL MATERIAL COMES
FROM ROD MILL.

- ROD MILL MATERIAL COMES
FROM OFF-SITE. NO PRIMARY
STEEL PRODUCTION NOW OR
IN THE PAST.

METALLURGY LABORATORY

(CERTIFIED IN DOMIN B. COG.)

TWO IN-HOUSE SPEC LABS

~~DBL~~

2/12/92 DBL

PICKLING OPERATIONS

STILL OPERATING

DBL

WASTE GENERATING OPS

WASTE WATER

CONTACT + NON CONTACT

99% RECIRCULATED WHEN

RELEASED GOES TO LAGOON

RECYCLING 15 MILLION GALLONS

PER DAY RECYCLED THRU ROD
MILL.

AVERAGE DISCHARGE 49

GALLONS A DAY IN '91

GENERATES SLUDGE IN LAGOON

- SLUDGE IS NOT HAZARDOUS

LAGOON IS PERIODICALLY DREDGED

EVERY 5-10 YEARS. SLUDGE

STORED IN DEWATERING BASIN

29

2/12/92

DCL

GOT APPROVAL TO LAND DAILY
SLUDGE TO AREAS OF PLANT
BECAUSE AN OLD SLUG BED.

DCL

A MINING OPERATION ON THE
BLUFF TO REPROCESS THE SLUG.

DCL

A PIT ~~WHERE~~ ^{FOR} ROD

MILL - SCALE TAKEN AND REPRO-
CESSED INTO STEEL.

SURFACE RUNOFF

EVERYTHING GOES TO THE
LAGOON

1 MPDS DISCHARGE POINT

FROM THE LAGOON.

THE MINING OPERATIONS HAS
^{GROUP}
APPLIED FOR A PERMIT BECAUSE

MAY HAVE RUNOFF WHICH

WOULD NOT COLLECT IN THE

2/12/92

DCL

30

STORMWATER SYSTEM

CITY SEWER DISCHARGE

CLEANING HOUSE + SANITARY

FOR CLEANING HOUSE LINE

pH NEUTRALIZATION LOOKING

^{DCL}
~~AT~~ AT ADDITIONAL TREATMENT.

DCL

TWO GRINDERS ON ROD MILL

WITH TWO BAGHOUSES

PACKED BOILERS w/ PERMITS

FURNACE

CONTINUOUS ANNULING FURNACE

w/ CO FLARE DEVICE

OTHER NATURAL GAS POWERED

DEVICES w/ AIR PERMITS

- NO SCRUBBERS OR ANYTHING

LIKE THAT

31

2/12/92

DB

SOLID WASTES

SPENT PICKLE LIQUOR - SULPHURIC
ACID - NOW HAVE REGENERATING
SYSTEM SO ONLY DUMP TANKS
TWICE A YEAR. NOT STORED
AFTER SPENT - HAULER

PUMPS DIRECTLY FROM PROCESS
TANKS AND REMOVES OFF
SITE - WHOLE TANK EMPTIED
SLUDGE AND OIL.

FOUR PROCESS TANKS + ACID

REGENERATION SYSTEM + ONE

WATER TANK + VIRGIN ACID
STORAGE TANK.

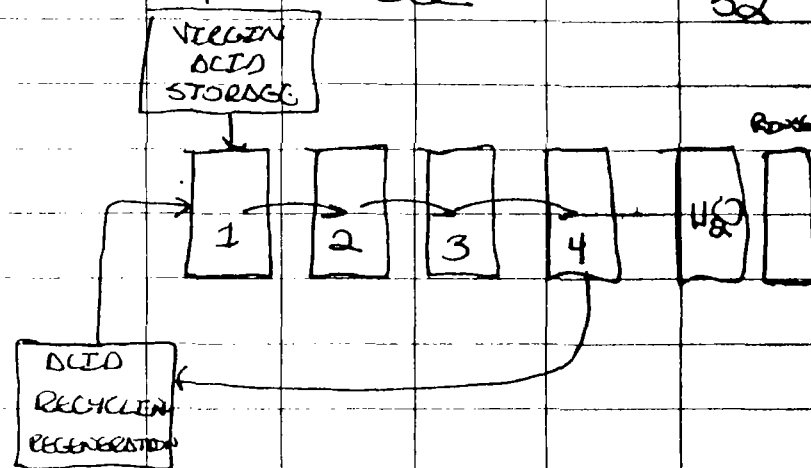
ACID CASCADERS DOWN THE
FOUR TANKS AND THEN GOES

TO ACID REGENERATION SYSTEM.

2/12/92

DB

32



SLUDGE + SPENT PICKLE LIQUOR
REMOVED FROM PROCESS TANKS
ABOUT TWICE A YEAR - ALL
DISPOSED OF BY DEEP WELL
INJECTION

WITH PH CORROSION COATING?

LIME + ZINC PHOSPHATE + SOAP

NOW USED - MAY HAVE BEEN
USED DURING PRIOR CALUMET
PROCESS

DB

33

2/12/92

DEI

SPENT SOLVENTS

- USE SAFETY KLEEN FOR DEGREASING - PAINT LOADERS
- NO LARGE PROCESS TANKS
- ALL STEEL SCRAPS, SCRAP, BROOMHOUSE DUST ETC. NOW BEING RECYCLED. HAVE HOPPER STORED IN TREN TAKEN OFF-SITE FOR RECYCLING

WASTE OILS

- STORAGE TANKS ATTACHED TO SKIMMER PUMPED OUT AND TAKEN OFF SITE. OTHER ~~DEI~~ WASTE OILS DRUMMED AND TAKEN OFF-SITE FOR RECLAMATION THROUGH

2/12/92

DEI

34

FUEL BLENDING OR REGENERATION

- NO DESIGNATED PCB STORAGE
- TWO TRANSFORMERS ON SITE
- ASBESTOS REMOVAL PROGRAM ONGOING

STORAGE AREAS

- DRUM STORAGE AREA 55 GALLON
- DRUM STORAGE 1,250 GALLON FEET
- TANK FARM FOR SPENT PICKLE LIQUOR 4 40,000 GALLON TANKS
- BOTH ARE BEING CLOSED UNDER COURT ORDER BY U.S. STEEL
- SOME SOIL REMOVAL IS ONGOING DISCUSSION ON SOIL CONTAMINATION LEVELS ARE ONGOING
- W/ USER
- BOTH HAVE BEEN OUT OF SERVICE SINCE 1984.

35

2/12/92

DO

TANK FORM SINCE LATE 60'S
HAS BEEN IN OPERATION. START
UP DATE OF DRUM STORAGE
AREA UNKNOWN

WASTE OIL DRUMS

STORED TWO PLACES - OLD ^{DO} DRUM
STORAGE AREA AND ANOTHER
SPOT DESIGNATED - BOTH
ENCLOSED UNDER ROOF ON
CONCRETE PAD - ~~LESS~~ ANTICIPATED
STORAGE IS LESS THAN 100
TOTAL AT ANY GIVEN TIME.

WASTE WATER TREATMENT

SCALE PIT, LAGOON AS
SETTLING BASIN
LAGOON INSTALLED 1966
CLAY LINED

2/12/92

DO

36

NO BUILT IN DREDGE SYSTEM.
DONE BY OUTSIDE CONTRACTOR
SCALE PIT \approx 1955 BUILT
CONCRETE PIT, TWO BAFFLES
+ AN OIL SKIMMER
DO

MINING TENDON

DIGGING BLUFF OUT RUNNING
THROUGH SCREEN - TO GRAB
AND SELL SLAG.
DO

REGULATORY HISTORY

GENERATOR ONLY RIGHT NOW
LARGE QUANTITY DEPENDING
UPON WOOD MONTH.
ACCUMULATE SKIMMER TRAIL ^{DO} ~~ARE~~
3 IN LAGOON 1 IN SCALE PIT.
NPDES DISCHARGE PRETREATMENT
COT -

37

2/12/92

DBL

3 USTS - PROCESS OIL +
LUBRICATING OIL. FULL
OR PARTLY FULL. HAVE
NOT BEEN IN USE PRIOR
TO NOV. 84. AMERICAN
STEEL + WIRE HAS NEVER
USED THEM - ARE UNDER
NEGOTIATION W/ U.S. STEEL
FOR CLOSURE.

TENANTS

APPARENTLY DO NOT GENERATE
ANY HAZ. WASTE.
COLD ROLL GENERATES SOME
WATER (NON-CONTACT) WHICH
DRAIN TO WWTTP. MAY
HAVE SEPARATE NPDES IN
FUTURE.
HOCK ONLY GENERATES TO

2/12/92

DBL

38

SANITARY SEWER

~~DBL~~

- SOME RESIDENTIAL RIGHT DOWN
STREET.

- 24 HOUR SECURITY + FENCED

BEATING OVER 10:00

~~DBL~~

Site Tour 10:15

WWTTP

- PIPES, MAKE UP WATER FROM OUGO
CLOUSE
- CONCRETE DAM BLOCKS OFF SAMPLING
POINT - AUTO WATER SAMPLER
- (NOT LINED) LOGGON. 15' DIAMETER
GULLON. 2 10-12 FT DEEP
- PHOTO 23 - LOGGON
- PHOTO 24 - GREEN SKIMMER - LARGE
TANKS NOT USED SMALL METAL TANKS

34

2/12/92 JDB

SEE JEL COLLECTION

DISCONNECT TO CHINAUGA RIVER

PDEE GOES UNDERNEATH

THE CANAL TO THE RIVER

DEWATERING BELD FILL 86

6-8 FT DEEP IN CORNER

DRAIN TELL DRAIN TO ULLAGE

SLUDGE DRYING. GROUNDWATER

MONITORING DUNE WAGON

WASTE FIRST PUT IN AS

WASH AS TESTING OF SLUDGE

ON DUNE HAZARDOUS -

RELOCATED UNDER OPEN

WASTE WATER

BELIEVED IT WAS UNDER LINED

25-26 (PHOTOS PANORAMIC

OF SLUDGE DEWATERING BED

PHOTO 27 SLUDGE BED

2/12/92 JDB

400

New Roll of FILM

SLOW PFI

10-15 FT OF WATER

30-4 FT DEEP OF WASTE PFI

JEL TAKEN OFF SURFACE BY

SKIMMER - JEL STORED + PUMPED

PHOTO 1+2 - SLOW PFI

JDB

WASTE ROD DRAIN

JDB

DRAIN STORAGE

CEASED OPERATION PRIOR TO '84

PHOTO 1 + 10 FI

FENCED IN NO RISE JDB

ON SLUG HAVE COMPLETED JDB

SMILING

PHOTO 3 DRAIN STORAGE AREA

41

2/10/92 DEL

10:50 am.

TANK FARM

EMULSION WASTING TANK - 4 TANKS

SOME EXCAVATION DONE ON BACK

2 TO

SOME SMALL - 4 WASTE

"HCL" ON SIDE "SULF" ON OTHER

SOME EXCAVATION DONE ON BACK

TANKS TANKS LEFT OPEN

PHOTO 4 - TANKS

LUBED BULK AT 10:50 '84

PHOTO 5 - 6 TANKS

PHOTO 7 - DUMPSTERS LADDED

FOR LEAD

NEW EMULSION SYSTEM

PRODUCES CLEANER EMULSION WHICH

THEY SELL.

2/10/92 DEL

42

SWEEP, SCALE, DUST FROM

BULKHOUSE STORED IN WAREHOUSE

PHOTO 8 - WAREHOUSE

TAKEN AT SITE FOR PREDICTION

PHOTO 9 - BULKHOUSE - 1 OF 2

ON OTHER SIDE OF BLDG.

~~DEL~~

PHOTO 10 - 1 OF TWO "NEW"

DRAIN STORAGE DRENS WASTE

CERAMIC - WASTE HURT CITIZENS

DEL 55 GALLON DRUMS

D. ASW WASTE ≈ 73 DRUMS

SOME SCULD SOME NOT

ON PLOTS

IN OPERATION SINCE LAST

PHOTO 10 TO THAT NO

CATERPILLER LOCATION FOR SIGN

~~DEL~~

43

2/12/92

DEI

WASTE OIL STORAGE -

A FEW DRUMS OF WASTE OIL WERE

HAD BEEN SUPPLIED ON SITE (EVIDENCE)

BECAUSE TETRA IN WASTE OIL

NO SAMPLES OF OIL WERE

2 TO 100 DRUMS CONTAINING

FLOOR INSIDE OF DRAINAGE

DRAIN 11, 12, 13 DRAIN STORAGE

MANY DRUMS LEFT OVER FROM

USE STILL

SITE VISIT OVER AT 11:40

~~DEI~~

BEGIN REPORTING 11:45

JOHN WILL SEND FACILITY REPORT

PCL WILL SEND COPIES OF WASTE OIL

PHOTOS OF DRAIN STORAGE AREAS

2/12/92

DEI

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TO JOHN MACK

DEBRIEFING OVER

11:55

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